**** WARNING ** WARNING ** WARNING ** WARNING ****
This document is intended for informational purposes only.

Users are cautioned that Caltrans does not assume any liability or responsibility based on these electronic files or for any defective or incomplete copying, exerpting, scanning, faxing or downloading of the contract documents. As always, for the official paper versions of the bidders and non-bidder packages, write to the California Department of Transportation, Plans and Bid Documents, Room 0200, P.O. Box 942874, Sacramento, CA 94272-0001, telephone (916) 654-4490 or fax (916) 654-7028. Office hours are 7:30 a.m. to 4:15 p.m. When ordering bidder or non-bidder packages it is important that you include a telephone and fax number, P.O. Box and street address so that you can receive addenda.

Note: Addenda information is NOT included with the electronic documents available via electronic file transfer. Only bidder or non-bidder package holders listed with the Caltrans Plans and Bid Documents section as described above will receive addenda information.

Seismic Retrofit Project

STATE OF CALIFORNIA

DEPARTMENT OF TRANSPORTATION

NOTICE TO CONTRACTORS

AND

SPECIAL PROVISIONS

FOR CONSTRUCTION ADJACENT TO STATE HIGHWAY IN

ALAMEDA COUNTY IN OAKLAND AT 2.9 km WEST OF SAN FRANCISCO-OAKLAND TOLL PLAZA

DISTRICT 04, ROUTE 80

For Use in Connection with Standard Specifications Dated JULY 1999, Standard Plans Dated JULY 1999, and Labor Surcharge and Equipment Rental Rates.

CONTRACT NO. 04-012084

INFORMAL BIDS CONTRACT

04-Ala-80-0.0/0.5

Bids Open: June 27, 2000
Dated: May 30, 2000

OSD

****

IMPORTANT SPECIAL NOTICES

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The bidder's attention is directed to Section 2-1.07, "Bay Bridge Pile Installation Demonstration Project Information/Questionnaire," in the Special Provisions.

Responses to the "Bay Bridge Pile Installation Demonstration Project **Information/Questionnaire"** included in the Proposal must be **submitted with the bid**.

A pre-award qualifications review meeting will be conducted with the apparent low bidder on June 29, 2000 at 10:00 A.M. in the third floor conference room, 1727 - 30th Street, Sacramento, CA 95816. The purpose of the meeting will be to determine the bidder's qualifications and ability to complete the work on this project. The second and third apparent low bidders may also be requested to participate in pre-award qualifications review meetings.

Establishing to the satisfaction of the Department the bidder's qualifications and ability to complete the Pile Installation Demonstration Project work in a safe and timely manner is a condition for being eligible for award of the contract.

The bidder's attention is directed to Section 5, containing specifications for "Disputes Review Board," of the Special Provisions, regarding establishing a Disputes Review Board (DRB) for the project.

The bidder's attention is directed to the following special requirements for this project concerning submission of DVBE information, award and execution of contract, and beginning of work:

First-tier subcontractors that will be used for meeting DVBE goals must be listed in the "List of Subcontractors" form regardless of dollar amount of work to be performed. Second- and lower-tier subcontractors need not be listed on the "List of Subcontractors" form. Other, non-DVBE subcontractors are to be listed on the "List of Subcontractors" form in conformance with the requirements in Section 2-1.054 of the Standard Specifications and the special provisions.

Identify second- and lower-tier DVBE subcontractors on the "Caltrans Bidder DVBE Information" form.

DVBE information shall be submitted **with the bid proposal**. (See **Section 2-1.04** of the special provisions.) The evaluation of the effort to meet the DVBE goal will be based on the information provided with the bid proposal. If the goal was not met, Caltrans' determination of good faith effort will be based on the information provided with the bid, and the decision will be final. Bidders and all subcontractors listed in the DVBE Information shall be available, by phone, on the day following the bid opening.

The DVBE information shall include all DVBE partners.

It is anticipated that this contract will be awarded within **10 days after bid opening**.

If the Bidder submits cash or a cashier's check or a certified check as the form of bidder's security (see Section 2-1.07 of the Standard Specifications), the Bidder shall also include with the bid submittal a signed and notarized affidavit from an admitted surety insurer that contract bonds, as required by Section 3-1.02, "Contract Bonds," of the Standard Specifications, will be provided within the specified time for executing and returning the contract for approval.

If the bidder claims a mistake was made in his bid, the bidder shall give the Department written notice within 48-hours, not including Saturdays, Sundays and legal holidays, after the opening of bids of the alleged mistake in lieu of the 5 days specified in Section 2-1.095, "Relief of Bidders," in the Standard Specifications. (See Section 2-1.01 of the special provisions.) Caltrans' FAX number for submitting this information is (916)227-6282. Such information shall be submitted "Attention Office Engineer."

The contract shall be signed by the successful bidder and shall be received with contract bonds by the Office of Office Engineer within **4 days**, including Saturdays, Sundays and legal holidays, after the bidder has received notice that the contract has been awarded. (See Section 3 of the special provisions.)

If properly executed by the bidder, it is anticipated the contract will be approved within 24 hours of when the executed contract and contract bonds are received by the Department.

The Contractor shall begin work within 5 calendar days after receiving notice that the contract has been approved. The contract work shall be completed before the expiration of **132 WORKING DAYS** beginning at **12:01 a.m. on the DAY AFTER THE DAY OF CONTRACT AWARD.** The definition of a working day has been re-defined for this project. (See Section 4 of the special provisions.)

The time limit specified in the Special Provisions for the completion of work contemplated herein is considered insufficient to permit completion of the work by the Contractor working a normal number of hours per day or week on a single shift basis. It is expected that additional shifts will be required throughout the life of the contract to the extent deemed necessary to ensure that the work will be completed within the time limit specified. (See Section 4 of the special provisions).

The following forms have been included at the end of the Proposal and Contract book to assist the successful bidder in early execution of the contract documents: Payment Bond, Performance Bond, Insurance, Payee Data Record.

SURETY 2000

Caltrans is conducting a pilot program in cooperation with Surety 2000, to test electronic bond verification systems. The purpose of the pilot program is to test the use of Surety 2000 for verifying a bidder's bond electronically.

Surety 2000 is an Internet-based surety verification and security system, developed in conjunction with the surety industry. Surety agents may contact Surety 2000 at 1-800-660-3263.

Bidders are encouraged to participate in the pilot program. To participate, the bidder is asked to provide the "Authorization Code" provided by Surety 2000, on a separate sheet, together with the standard bidder's bond required by the specifications. The bidder's surety agent may obtain the "Authorization Code" from Surety 2000.

The Department will use the "Authorization Code" to access the Surety 2000 database, and independently verify the actual bidder's bond and document the functioning of the Surety 2000 system.

"Authorization Codes" will be used only to verify bidder's bonds, and only as part of the pilot program. The use of "Authorization Codes" will not be accepted in lieu of the bidder's bond or other bidder's security required in the specifications during the pilot study.

The function of the Surety 2000 system is to provide an easier way for Contractors to protect their bid security, and to discourage fraud. This system is available to all California admitted sureties and surety agents.

The results of the pilot study will be tabulated, and at some time in the future, the Department may consider accepting electronic bidder's bond verification in lieu of the bidder's bond specified.

TABLE OF CONTENTS

STANDARD PLANS LIST

The Standard Plan sheets applicable to this contract include, but are not limited to those indicated below. The Revised Standard Plans (RSP) and New Standard Plans (NSP) which apply to this contract are included as individual sheets of the project plans.

A10A	ABBREVIATIONS
A10B	SYMBOLS
BO-1	BRIDGE DETAILS

Seismic Retrofit State Project with DVBE Goals (03-08-00)

DEPARTMENT OF TRANSPORTATION

NOTICE TO CONTRACTORS

THIS IS AN INFORMAL BIDS CONTRACT

CONTRACT NO. 04-012084

04-Ala-80-0.0/0.5

Sealed proposals for the work shown on the plans entitled:

STATE OF CALIFORNIA; DEPARTMENT OF TRANSPORTATION; PROJECT PLANS FOR CONSTRUCTION ADJACENT TO STATE HIGHWAY IN ALAMEDA COUNTY IN OAKLAND AT 2.9 km WEST OF SAN FRANCISCO-OAKLAND TOLL PLAZA

will be received at the Department of Transportation, 1120 N Street, Room 0200, MS #26, Sacramento, CA 95814, until 2 o'clock p.m. on June 27, 2000, at which time they will be publicly opened and read in Room 0100 at the same address.

Proposal forms for this work are included in a separate book entitled:

STATE OF CALIFORNIA; DEPARTMENT OF TRANSPORTATION; PROPOSAL AND CONTRACT FOR CONSTRUCTION ADJACENT TO STATE HIGHWAY IN ALAMEDA COUNTY IN OAKLAND AT 2.9 km WEST OF SAN FRANCISCO-OAKLAND TOLL PLAZA

General work description: Pile Installation Demonstration Project.

This project has a goal of 3 percent disabled veteran business enterprise (DVBE) participation.

No prebid meeting is scheduled for this project.

The time limit specified for the completion of the work contemplated herein is considered insufficient to permit completion of the work by the Contractor working a normal number of hours per day or week on a single shift basis. Should the Contractor fail to maintain the progress of the work in conformance with the "Progress Schedule" required in these special provisions, additional shifts will be required to the extent necessary to ensure that the progress conforms to the abovementioned schedule and that the work will be completed within the time limit specified.

Bids are required for the entire work described herein.

At the time this contract is awarded, the Contractor shall possess either a Class A license or a Class C-61D30 license.

The Contractor must also be properly licensed at the time the bid is submitted, except that on a joint venture bid a joint venture license may be obtained by a combination of licenses after bid opening but before award in conformance with Business and Professions Code, Section 7029.1.

This contract is subject to state contract nondiscrimination and compliance requirements pursuant to Government Code, Section 12990.

Preference will be granted to bidders properly certified as a "Small Business" as determined by the Department of General Services, Office of Small Business Certification and Resources at the time of bid opening in conformance with the provisions in Section 2-1.05, "Small Business Preference," of the special provisions, and Section 1896 et seq, Title 2, California Code of Regulations. A form for requesting a "Small Business" preference is included with the bid documents. Applications for status as a "Small Business" must be submitted to the Department of General Services, Office of Small Business Certification and Resources, 1531 "I" Street, Second Floor, Sacramento, CA 95814, Telephone No. (916) 322-5060.

A reciprocal preference will be granted to "California company" bidders in conformance with Section 6107 of the Public Contract Code. (See Sections 2 and 3 of the special provisions.) A form for indicating whether bidders are or are not a "California company" is included in the bid documents and is to be filled in and signed by all bidders.

Project plans, special provisions, and proposal forms for bidding this project can only be obtained at the Department of Transportation, Plans and Bid Documents, Room 0200, MS #26, Transportation Building, 1120 N Street, Sacramento, California 95814, FAX No. (916) 654-7028, Telephone No. (916) 654-4490. Use FAX orders to expedite orders for project plans, special provisions and proposal forms. FAX orders must include credit card charge number, card expiration date and authorizing signature. Project plans, special provisions, and proposal forms may be seen at the above Department of Transportation office and at the offices of the District Directors of Transportation at Irvine, Oakland, and the district in which the work is situated. Standard Specifications and Standard Plans are available through the State of California, Department of Transportation, Publications Unit, 1900 Royal Oaks Drive, Sacramento, CA 95815, Telephone No. (916) 445-3520.

Cross sections for this project are not available.

The successful bidder shall furnish a payment bond and a performance bond.

Pursuant to Section 1773 of the Labor Code, the general prevailing wage rates in the county, or counties, in which the work is to be done have been determined by the Director of the California Department of Industrial Relations. These wages are set forth in the General Prevailing Wage Rates for this project, available at the Labor Compliance Office at the offices of the District Director of Transportation for the district in which the work is situated, and available from the California Department of Industrial Relations' Internet Web Site at: http://www.dir.ca.gov. Future effective general prevailing wage rates which have been predetermined and are on file with the Department of Industrial Relations are referenced but not printed in the general prevailing wage rates.

DEPARTMENT OF TRANSPORTATION

Deputy Director Transportation Engineering

Dated May 30, 2000

EMA

COPY OF ENGINEER'S ESTIMATE

(NOT TO BE USED FOR BIDDING PURPOSES)

04-012084

Item	Item Code	Item	Unit of Measure	Estimated Quantity
1	018689	ELECTRONIC MOBILE DAILY DIARY COMPUTER SYSTEM DATA DELIVERY	LS	LUMP SUM
2	018690	TIME RELATED OVERHEAD	WDAY	132
3	618691	TRANSPORTATION FOR THE ENGINEER	LS	LUMP SUM
4	018692	ENGINEER'S FIELD OFFICE	LS	LUMP SUM
5	070010	PROGRESS SCHEDULE (CRITICAL PATH)	LS	LUMP SUM
6	048264	INSTALL STATE-FURNISHED 2.438 M STEEL PIPE PILE	EA	3
7	048265	ESTABLISH MARINE ACCESS	LS	LUMP SUM
8	048266	NAVIGATIONAL LIGHTING	LS	LUMP SUM
9	018693	MARINE MAMMAL MONITORING	LS	LUMP SUM
10	018694	SOUND-ATTENUATION EFFECTIVENESS MONITORING	LS	LUMP SUM
11	018695	SOUND-ATTENUATING SYSTEM - BUBBLE CURTAINS	LS	LUMP SUM
12	018696	SOUND-ATTENUATING SYSTEM-GUNDERBOOM	LS	LUMP SUM
13	999990	MOBILIZATION	LS	LUMP SUM

STATE OF CALIFORNIA

DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISIONS

Annexed to Contract No. 04-012084

SECTION 1. SPECIFICATIONS AND PLANS

The work embraced herein shall conform to the provisions in the Standard Specifications dated July 1999, and the Standard Plans dated July 1999, of the Department of Transportation insofar as the same may apply, and these special provisions.

Amendments to the Standard Specifications set forth in these special provisions shall be considered as part of the Standard Specifications for the purposes set forth in Section 5-1.04, "Coordination and Interpretation of Plans, Standard Specifications and Special Provisions," of the Standard Specifications. Whenever either the term "Standard Specifications is amended" or the term "Standard Specifications are amended" is used in the special provisions, the indented text or table following the term shall be considered an amendment to the Standard Specifications. In case of conflict between such amendments and the Standard Specifications, the amendments shall take precedence over and be used in lieu of the conflicting portions.

In case of conflict between the Standard Specifications and these special provisions, the special provisions shall take precedence over and shall be used in lieu of the conflicting portions.

SECTION 2. PROPOSAL REQUIREMENTS AND CONDITIONS

2-1.01 GENERAL

The bidder's attention is directed to the provisions in Section 2, "Proposal Requirements and Conditions," of the Standard Specifications and these special provisions for the requirements and conditions which the bidder must observe in the preparation of the proposal form and the submission of the bid.

In addition to the subcontractors required to be listed in conformance with Section 2-1.054, "Required Listing of Proposed Subcontractors," of the Standard Specifications, each proposal shall have listed therein the name and address of each DVBE subcontractor to be used for credit in meeting the goal, and to whom the bidder proposes to directly subcontract portions of the work. The list of subcontractors shall also set forth the portion of work that will be performed by each subcontractor listed. A sheet for listing the subcontractors is included in the Proposal.

If the Bidder submits cash or a cashier's check or a certified check as the form of bidder's security (See said Section 2-1.07 of the Standard Specifications), the Bidder shall also include with the bid submittal a signed and notarized affidavit from an admitted surety insurer that contract bonds, as required by Section 3-1.02, "Contract Bonds," of the Standard Specifications, will be provided within the time specified elsewhere in these special provisions for executing and returning the contract for approval.

The Bidder's Bond form mentioned in the last paragraph in Section 2-1.07, "Proposal Guaranty," of the Standard Specifications will be found following the signature page of the Proposal.

In conformance with Public Contract Code Section 7106, a Noncollusion Affidavit is included in the Proposal. Signing the Proposal shall also constitute signature of the Noncollusion Affidavit.

If the bidder claims a mistake was made in his bid, the bidder shall give the Department written notice within 48 hours, not including Saturdays, Sundays and legal holidays, after the opening of bids of the alleged mistake, in lieu of the 5 days specified in Section 2-1.095, "Relief of Bidders," in the Standard Specifications. The notice of alleged mistake shall specify in detail how the mistake occurred.

Submit request for substitution of an "or equal" item, and the data substantiating the request to the Department of Transportation, Division Of Construction - Duty Senior, Mail Station: 3 - B, 111 Grand Avenue / P. O. Box 23660, Oakland, Ca 94623-0660, so that the request is received by the Department by close of business on the fourth day, not including Saturdays, Sundays and legal holidays, following bid opening.

2-1.02 DISABLED VETERAN BUSINESS ENTERPRISE (DVBE)

Section 10115 of the Public Contract Code requires the Department to implement provisions to establish a goal for Disabled Veterans Business Enterprise (DVBE) in contracts.

It is the policy of the Department that Disabled Veteran Business Enterprise (DVBE) shall have the maximum opportunity to participate in the performance of contracts financed solely with state funds. The Contractor shall ensure that DVBEs have the maximum opportunity to participate in the performance of this contract and shall take all necessary and reasonable steps for this assurance. The Contractor shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of subcontracts. Failure to carry out the requirements of this paragraph shall constitute a breach of contract and may result in termination of this contract or other remedy the Department may deem appropriate.

Bidder's attention is directed to the following:

A. "Disabled Veteran Business Enterprise" (DVBE) means a business concern certified as a DVBE by the Office of Small Business Certification and Resources, Department of General Services.
B. A DVBE may participate as a prime contractor, subcontractor, joint venture partner with a prime or subcontractor, or vendor of material or supplies.
C. Credit for DVBE prime contractors will be 100 percent.
D. A DVBE joint venture partner must be responsible for specific contract items of work, or portions thereof. Responsibility means actually performing, managing and supervising the work with its own forces. The DVBE joint venture partner must share in the ownership, control, management responsibilities, risks and profits of the joint venture. The DVBE joint venturer must submit the joint venture agreement with the Caltrans Bidder DVBE Information form required in Section 2-1.04, "Submission of DVBE Information," elsewhere in these special provisions.
E. A DVBE must perform a commercially useful function, i.e., must be responsible for the execution of a distinct element of the work and must carry out its responsibility by actually performing, managing and supervising the work.
F. Credit for DVBE vendors of materials or supplies is limited to 60 percent of the amount to be paid to the vendor for the material unless the vendor manufactures or substantially alters the goods.
G. Credit for trucking by DVBEs will be as follows:

    1. One hundred percent of the amount to be paid when a DVBE trucker will perform the trucking with his/her own trucks, tractors and employees.
    2. Twenty percent of the amount to be paid to DVBE trucking brokers who do not have a "certified roster."
    3. One hundred percent of the amount to be paid to DVBE trucking brokers who have signed agreements that all trucking will be performed by DVBE truckers if credit is toward the DVBE goal, a "certified roster" showing that all trucks are owned by DVBEs, and a signed statement on the "certified roster" that indicates that 100 percent of revenue paid by the broker will be paid to the DVBEs listed on the "certified roster."
    4. Twenty percent of the amount to be paid to trucking brokers who are not a DVBE but who have signed agreements with DVBE truckers assuring that at least 20 percent of the trucking will be performed by DVBE truckers if credit is toward the DVBE goal, a "certified roster" showing that at least 20 percent of the number of trucks are owned by DVBE truckers, and a signed statement on the "certified roster" that indicates that at least 20 percent of the revenue paid by the broker will be paid to the DVBEs listed on the "certified roster."

    The "certified roster" referred to herein shall conform to the requirements in Section 2-1.04, "Submission Of DVBE Information," elsewhere in these special provisions.
H. DVBEs and DVBE joint venture partners must be certified DVBEs as determined by the Department of General Services, Office of Small Business Certification and Resources, 1531 "I" Street, Second Floor, Sacramento, CA 95814, on the date bids for the project are opened before credit may be allowed toward the DVBE goal. It is the Contractor's responsibility to verify that DVBEs are certified.
I. Noncompliance by the Contractor with these requirements constitutes a breach of this contract and may result in termination of the contract or other appropriate remedy for a breach of this contract.

2-1.03 DVBE GOAL FOR THIS PROJECT

The Department has established the following goal for Disabled Veteran Business Enterprise (DVBE) participation for this project:

Disabled Veteran Business Enterprise (DVBE): 3 percent.

It is the bidder's responsibility to make a sufficient portion of the work available to subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DVBE subcontractors and suppliers, so as to assure meeting the goal for DVBE participation.

The Office of Small Business Certification and Resources, Department of General Services, may be contacted at (916) 322-5060 or visit their internet web site at http://www.osmb.dgs.ca.gov/ for program information and certification status. The Department's Business Enterprise Program may also be contacted at (916) 227-9599 or the internet web site at http://www.dot.ca.gov/hq/bep/.

2-1.04 SUBMISSION OF DVBE INFORMATION

The required DVBE information shall be submitted WITH THE BID on the following "CALTRANS BIDDER - DVBE - INFORMATION" and "TELEPHONE LOG AND LIST OF REJECTED DVBEs."

It is the bidder's responsibility to meet the goal for DVBE participation or to establish that, prior to bidding, the bidder made good faith efforts to do so based on the information in the "CALTRANS BIDDER - DVBE - INFORMATION" and "TELEPHONE LOG AND LIST OF REJECTED DVBEs."

The information to show that the DVBE goal will be met on the "CALTRANS BIDDER - DVBE - INFORMATION" form shall include the names of DVBEs and DVBE joint venture partners to be used, with a complete description of work or supplies to be provided by each and the dollar value of each such DVBE transaction. When 100 percent of a contract item of work is not to be performed or furnished by a DVBE, a description of the exact portion of said work to be performed or furnished by that DVBE shall be included in the DVBE information, including the planned location of said work. DVBE prime contractors shall enter their Office of Small Business Certification and Resources (OSBCR) - DVBE reference number and/or DBA name, as listed with OSBCR, on the line provided. (Note: DVBE subcontractors to whom the bidder proposes to directly subcontract portions of the work are to be named in the bid. - See Section 2-1.054, "Required Listing of Proposed Subcontractors," of the Standard Specifications and Section 2-1.01, "General," of these special provisions, regarding listing of proposed subcontractors.)

If credit for trucking by a DVBE trucking broker is shown on the bidder's information as 100 percent of the revenue to be paid by the broker is to be paid to DVBE truckers, a "certified roster" of the broker's trucks to be used must be included with the bid. The "certified roster" must indicate that all the trucks are owned by certified DVBEs and must show the DVBE truck numbers, owner's name, Public Utilities Commission Cal-T numbers, and the DVBE certification numbers. The roster must indicate that all revenue paid by the broker will be paid to DVBEs listed on the "certified roster".

If credit for trucking by a trucking broker who is not a DVBE is shown in the bidder's information, a "certified roster" of the broker's trucks to be used must be included with the bid. The "certified roster" must indicate that at least 20 percent of the broker's trucks are owned by DVBEs and must show the DVBE truck numbers, owner's name, Public Utilities Commission Cal-T numbers, and the DVBE certification numbers. The roster must indicate that at least 20 percent of the revenue paid by the broker will be paid to DVBEs listed on the "certified roster".

Information necessary to establish the bidder's good faith efforts to meet the DVBE goals shall be included in the "TELEPHONE LOG AND LIST OF REJECTED DVBEs" form located in the Proposal and shall include:

A. The names, dates and times of notices of all certified DVBEs solicited by telephone for this project and the dates, times and methods used for following up initial solicitations to determine with certainty whether the DVBEs were interested.
B. The names of DVBEs who submitted bids which were not accepted and the reason for rejection of the DVBEs bid.

Bidders are cautioned that even though their submittal indicates they will meet the stated DVBE goal, their submittal should also include the telephone log and rejected DVBE information to protect their eligibility for award of the contract in the event the Department, in its review, finds that the goal has not been met.

It is the bidders responsibility to be available, by phone, both the day of and the day after the bid opening to answer questions and provide good faith effort clarification. The bidder shall also assure that listed DVBEs are available, by phone, on both days.

If it is found that the goal has not been met, the Department will review the information submitted with the bid to determine the bidder’s good faith effort. In the event that the Department determines that a bidder has not made a good faith effort based on the information submitted with the bid and its independent investigation, the Department’s decision will be final.

2-1.05 SMALL BUSINESS PREFERENCE

Attention is directed to "Award and Execution of Contract" of these special provisions.

Attention is also directed to the Small Business Procurement and Contract Act, Government Code Section 14835, et seq and Title 2, California Code of Regulations, Section 1896, et seq.

Bidders who wish to be classified as a Small Business under the provisions of those laws and regulations, shall be certified as Small Business by the Department of General Services, Office of Small Business Certification and Resources, 1531 "I" Street, Second Floor, Sacramento, CA 95814.

To request Small Business Preference, bidders shall fill out and sign the Request for Small Business Preference form in the Proposal and shall attach a copy of their Office of Small Business Certification and Resources (OSBCR) small business certification letter to the form. The bidder's signature on the Request for Small Business Preference certifies, under penalty of perjury, that the bidder is certified as Small Business at the time of bid opening and further certifies, under penalty of perjury, that under the following conditions, at least 50 percent of the subcontractors to be utilized on the project are either certified Small Business or have applied for Small Business certification by bid opening date and are subsequently granted Small Business certification.

The conditions requiring the aforementioned 50 percent level of subcontracting by Small Business subcontractors apply if:

A. The lowest responsible bid for the project exceeds $100,000; and
B. The project work to be performed requires a Class A or a Class B contractor's license; and
C. Two or more subcontractors will be used.

If the above conditions apply and Small Business Preference is granted in the award of the contract, the 50 percent Small Business subcontractor utilization level shall be maintained throughout the life of the contract.

2-1.06 CALIFORNIA COMPANY PREFERENCE

Attention is directed to "Award and Execution of Contract" of these special provisions.

In conformance with the requirements of Section 6107 of the Public Contract Code, a "California company" will be granted a reciprocal preference for bid comparison purposes as against a nonresident contractor from any state that gives or requires a preference to be given contractors from that state on its public entity construction contracts.

A "California company" means a sole proprietorship, partnership, joint venture, corporation, or other business entity that was a licensed California contractor on the date when bids for the public contract were opened and meets one of the following:

A. Has its principal place of business in California.
B. Has its principal place of business in a state in which there is no local contractor preference on construction contracts.
C. Has its principal place of business in a state in which there is a local contractor construction preference and the contractor has paid not less than $5000 in sales or use taxes to California for construction related activity for each of the five years immediately preceding the submission of the bid.

To carry out the "California company" reciprocal preference requirements of Section 6107 of the Public Contract Code, all bidders shall fill out and sign the California Company Preference form in the Proposal. The bidder's signature on the California Company Preference form certifies, under penalty of perjury, that the bidder is or is not a "California company" and if not, the amount of the preference applied by the state of the nonresident Contractor.

A nonresident Contractor shall disclose any and all bid preferences provided to the nonresident Contractor by the state or country in which the nonresident Contractor has its principal place of business.

Proposals without the California Company Preference form filled out and signed may be rejected.

2-1.07 PILE INSTALLATION DEMONSTRATION PROJECT INFORMATION/QUESTIONNAIRE

The Department has established the need to obtain information regarding each bidder's qualifications for performing pile installation demonstration project work contracts.

Bidders shall submit responses to the "Pile Installation Demonstration Project Information/Questionnaire" included in the Proposal. The responses to the Questionnaire shall be submitted with the bid.

In signing the signature page of the Proposal, the bidder certifies that the information and answers on the "Pile Installation Demonstration Project Information/Questionnaire" are complete and accurate.

2-1.08 ESCROW OF BID DOCUMENTATION

Bid documentation shall consist of all documentary and calculated information generated by the Contractor in preparation of the bid. The bid documentation shall conform to the requirements in these special provisions, and shall be submitted to the Department and held in escrow for the duration of the contract.

In the resolution of disputes involving the project, the escrowed bid documents will be the only documents accepted from the Contractor regarding preparation of the bid.

In signing the proposal, the bidder certifies that the material submitted for escrow constitutes all the documentary information used in preparation of the bid and that he has personally examined the contents of the container and that they are complete.

The bidder shall include with the proposal, the identification of the bidder's representative authorized to present the bid documentation and the persons responsible for preparing the bidder's estimate.

Nothing in the bid documentation shall be construed to change or modify the terms or conditions of the contract.

Escrowed bid documentation will not be used for pre-award evaluation of the Contractor's anticipated methods of construction, nor to assess the Contractor's qualifications for performing the work.

Bid documentation shall clearly itemize the Contractor's estimated costs of performing the work. The documentation submitted shall be complete and so detailed as to allow for an in-depth analysis of the Contractor's estimate.

The bid documentation shall include, but not be limited to: quantity takeoffs; rate schedules for the direct costs and the time- and nontime-related indirect costs for labor (by craft), plant and equipment ownership and operation, permanent and expendable materials, insurance and subcontracted work; estimated construction schedules, including sequence and duration and development of production rates; quotations from subcontractors and suppliers; estimates of field and home office overhead; contingency and margin for each contract item of work; and other reports, calculations and information used by the bidder to arrive at the estimate submitted with the proposal.

The Contractor shall also submit bid documentation for each subcontractor whose total subcontract exceeds $250,000. Subcontractor bid documentation shall be enclosed with the Contractor's submittal. The examination of subcontractors' bid documentation will be accomplished in the same manner as for the Contractor's bid documentation. If a subcontractor is replaced, bid documentation for the new subcontractor shall be submitted for review and escrow before authorization for the substitution will be granted. Upon request of a subcontractor, the bid documentation from that subcontractor shall be reviewed only by the subcontractor and the Department.

If the bidder is a joint venture, the bid documentation shall include the joint venture agreement, the joint venture estimate comparison and final reconciliation of the joint venture estimate.

Copies of the proposals submitted by the first, second and third low bidders will be provided to the respective bidders for inclusion in the bid documentation to be escrowed.

The first, second, and third apparent low bidders shall present the bid documentation for escrow at the District 04 Office, 111 Grand Avenue, Room 12-816, Oakland, CA, on the first Monday, at 10:00 a.m., following the time indicated in the "Notice to Contractors" for the opening of bids.

Bid documentation shall be submitted in a sealed container, clearly marked with the bidder's name, date of submittal, project contract number and the words, "Bid Documentation for Escrow."

Failure to submit the actual and complete bid documentation as specified herein within the time specified shall be cause for rejection of the proposal.

Upon submittal, the bid documentation of the apparent low bidder will be examined and inventoried by the duly designated representatives of the Contractor and the Department to ensure that the bid documentation is authentic, legible, and in accordance with the terms of this section "Escrow of Bid Documentation." The examination will not include review of, nor will it constitute approval of, proposed construction methods, estimating assumptions or interpretation of the contract. The examination will not alter any conditions or terms of the contract. The acceptance or rejection by the Department that the submitted bid documents are in compliance with this section "Escrow of Bid Documentation" shall be completed within 48 hours of the time the bid documentation is submitted by the Contractor.

At the completion of the examination, the bid documents will be sealed and jointly deposited at an agreed commercial bank.

Bid documentation submitted by the second and third apparent low bidders will be jointly deposited at agreed commercial banks. If the apparent low bid is withdrawn or rejected, the bid documentation of the second low bidder will be examined and inventoried in the manner specified above, then sealed and deposited again in escrow. If the second low bid is withdrawn or rejected, the bid documentation of the third low bidder will be examined and inventoried in the manner specified above, then sealed and deposited again in escrow. Upon execution and final approval of the contract or rejection of all bids, the bid documentation will be returned to any remaining unsuccessful bidders.

The escrowed bid documentation may be examined by the designated representatives of both the Department and the Contractor, at any time deemed necessary by either the Department or the Contractor to assist in the negotiation of price adjustments and change orders, or in the settlement of claims or disputes.

If requested by a Disputes Review Board, the escrowed bid documentation may be utilized to assist the Board in its recommendations.

The bid documentation submitted by the Contractor will be held in escrow until the contract has been completed, the ultimate resolution of all disputes and claims has been achieved and receipt of final payment has been accepted by the Contractor. The escrowed bid documentation will then be released from escrow to the Contractor.

The bid documentation submitted by the bidder is, and shall remain, the property of the bidder, and is subject to only joint review by the Department and the bidder. The Department stipulates and expressly acknowledges that the submitted bid documentation constitutes trade secrets and will not be deemed public records. This acknowledgment is based on the

Department's express understanding that the information contained in the bid documentation is not known outside the bidder's business, is known only to a limited extent and only by a limited number of employees of the bidder, is safeguarded while in the bidder's possession, is extremely valuable to the bidder and could be extremely valuable to the bidder's competitors by virtue of it reflecting the bidder's contemplated techniques of construction. The Department acknowledges that the bid documentation includes a compilation of information used in the bidder's business, intended to give the bidder an opportunity to obtain an advantage over competitors who do not know of or use the contents of the documentation. The Department agrees to safeguard the bid documentation, and all information contained therein, against disclosure, including disclosure of subcontractor bid documentation to the Contractor and other subcontractors to the fullest extent permitted by law. However, in the event of arbitration or litigation, the bid documentation shall be subject to discovery, and the Department assumes no responsibility for safeguarding the bid documentation unless the Contractor has obtained an appropriate protective order issued by the arbitrator or the court.

Full compensation for preparing the bid documentation, presenting it for escrow and reviewing it for escrow and upon request of the Engineer shall be considered as included in the contract prices paid for the various items of work, and no additional compensation will be allowed therefor.

The direct cost of depositing the bid documentation in escrow at the agreed commercial bank will be paid by the State.

SECTION 3. PRE-AWARD MEETING AND AWARD AND EXECUTION OF CONTRACT

3-1.01 GENERAL

The bidder's attention is directed to the provisions in Section 3, "Award and Execution of Contract," of the Standard Specifications, and these special provisions for the requirements and conditions concerning the pre-award meeting and the award and execution of contract.

3-1.01A PRE-AWARD MEETING.--Bidders are advised that on June 29, 2000 at 10:00 a.m., in the third floor conference room, 1727 - 30th Street, Sacramento, CA 95816, the apparent low bidder shall participate in a pre-award qualifications review meeting conducted by an agent of the Director. Non-attendance to the qualifications review meeting by the apparent low bidder shall be just cause for rejection of the bid and forfeiture of the proposal guaranty. At the qualifications review meeting, the low bidder shall be prepared to discuss and answer questions relative to the responses to the "Pile Installation Demonstration Project Information/Questionnaire" submitted with the bid. The Director's agent will prepare written findings and recommendations to the Engineer regarding award of the contract to the apparent low bidder based on the Pile Installation Demonstration Project information and responses submitted with the bid, and on the information provided at the qualifications review meeting. The Engineer's determination on the bidder's qualifications for performing Pile Installation Demonstration Project work, in a manner that is safe for the workers and the public, will be based on the bidder's experience, qualifications of on-site supervisory personnel, equipment, conceptual approach to the Pile Installation Demonstration Project work and safety history of the bidder and its supervisory personnel. The decision of the Engineer regarding the bidder's qualifications shall be final.

The second and third apparent low bidders shall participate in pre-award qualifications review meetings if requested to do so by the Department. Notification by the Department will be within 7 days after the bid opening, and will be provided at least 12 hours prior to the qualifications review meeting. Non-attendance by the second or third apparent low bidder at any such requested meeting shall be just cause for rejection of bid and forfeiture of the proposal guaranty.

3-1.01B AWARD AND EXECUTION OF CONTRACT.--The award of contract, if it be awarded, will be to the lowest responsible bidder whose proposal complies with all the requirements prescribed and who has met the goal for DVBE participation or has demonstrated, to the satisfaction of the Department, good faith effort to do so and who has established to the satisfaction of the Engineer, the qualifications and ability to complete the Pile Installation Demonstration Project work on this project in a safe and timely manner. Meeting the goal for DVBE participation or demonstrating, to the satisfaction of the Department, good faith efforts to do so and establishing the qualifications and ability to complete the Pile Installation Demonstration Project work are conditions for being eligible for award of contract.

It is anticipated that this contract will be awarded within 10 days after the bid opening.

Each of the two bonds required in Section 3-1.02, "Contract Bonds", of the Standard Specifications shall be in the sum equal to 100 percent of the contract price.

The contract shall be signed by the successful bidder and shall be received with contract bonds by the Department within 4 days, including Saturdays, Sundays and legal holidays, after the bidder has received notice that the contract has been awarded. Failure to do so shall be just cause for forfeiture of the proposal guaranty. The executed contract documents shall be delivered to the following address: Department of Transportation, P.O. Box 942874, Sacramento, CA 94274-0001, Attn: Office Engineer (MS 43)- Contracts.

Within 2 days, not including Saturdays, Sundays and legal holidays, of return of the executed contract and bonds, the Department will notify the successful bidder of either approval of the contract by the Attorney General or the attorney appointed and authorized to represent the Department of Transportation, or disapproval of the submittal. Should the Department fail to provide notification within said 2 days, the delay will be considered a right of way delay as specified in Section 8-1.09, "Right of Way Delays," of the Standard Specifications.

A "Payee Data Record" form will be included in the contract documents to be executed by the successful bidder. The purpose of the form is to facilitate the collection of taxpayer identification data. The form shall be completed and returned to the Department by the successful bidder with the executed contract and contract bonds. For the purposes of the form, vendor shall be deemed to mean the successful bidder. The form is not to be completed for subcontractors or suppliers. Failure to complete and return the "Payee Data Record" form to the Department as provided herein will result in the retention of 20 percent of payments due the contractor and penalties of up to $20,000. This retention of payments for failure to complete the "Payee Data Record" form is in addition to any other retention of payments due the Contractor.

Attention is also directed to "Small Business Preference" of these special provisions. Any bidder who is certified as a Small Business by the Department of General Services, Office of Small Business Certification and Resources will be allowed a preference in the award of this contract, if it be awarded, under the following conditions:

A. The apparent low bidder is not certified as a Small Business, or has not filled out and signed the Request for Small Business Preference included with the bid documents and attached a copy of their Office of Small Business Certification and Resources (OSBCR) small business certification letter to the form; and
B. The bidder filled out and signed the Request for Small Business Preference form included with the bid documents and attached a copy of their Office of Small Business Certification and Resources (OSBCR) small business certification letter to the form.

The small business preference will be a reduction in the bid submitted by the small business contractor, for bid comparison purposes, by an amount equal to 5 percent of the amount bid by the apparent low bidder, the amount not to exceed $50,000. If this reduction results in the small business contractor becoming the low bidder, then the contract will be awarded to the small business contractor on the basis of the actual bid of the small business contractor notwithstanding the reduced bid price used for bid comparison purposes.

Attention is also directed to "California Company Preference" of these special provisions.

The amount of the California company reciprocal preference shall be equal to the amount of the preference applied by the state of the nonresident contractor with the lowest responsive bid, except where the "California company" is eligible for a California Small Business Preference, in which case the preference applied shall be the greater of the two, but not both.

If the bidder submitting the lowest responsive bid is not a "California company" and with the benefit of the reciprocal preference, a "California company's" responsive bid is equal to or less than the original lowest responsive bid, the "California company" will be awarded the contract at its submitted bid price except as provided below.

Small business bidders shall have precedence over nonsmall business bidders in that the application of the "California company" preference for which nonsmall business bidders may be eligible shall not result in the denial of the award to a small business bidder.

SECTION 4. BEGINNING OF WORK, TIME OF COMPLETION AND LIQUIDATED DAMAGES

Attention is directed to the provisions in Section 8-1.03, "Beginning of Work," in Section 8-1.06, "Time of Completion," and in Section 8-1.07, "Liquidated Damages," of the Standard Specifications and these special provisions.

The Contractor shall begin work within 5 calendar days after the contract has been approved by the Attorney General or the attorney appointed and authorized to represent the Department of Transportation.

This work shall be diligently prosecuted to completion before the expiration of **132 WORKING DAYS** beginning at 12:01 a.m. on the **FIRST WORKING DAY AFTER CONTRACT AWARD.**

The Contractor shall pay to the State of California the sum of $10000 per day, for each and every calendar day's delay in finishing the work in excess of the number of working days prescribed above.

The 72 hours advance notice before beginning work as referred to in said Section 8-1.03 is changed to 24 hours advance notice for this project.

A working day as defined in said Section 8-1.06 is re-defined for this project. Subparagraph (a) of the second paragraph in said Section 8-1.06 shall not apply. Saturdays, Sundays and legal holidays, except days of inclement weather, will be counted as working days.

The time limit specified for the completion of the work contemplated herein is considered insufficient to permit completion of the work by the Contractor working a normal number of hours per day or week on a single shift basis. Should the Contractor fail to maintain the progress of the work in conformance with the "Progress Schedule" required in these

special provisions, additional shifts will be required to the extent necessary to ensure that the progress conforms to the abovementioned schedule and that the work will be completed within the time limit specified.

Full compensation for any additional costs occasioned by compliance with the provisions in this section shall be considered as included in the prices paid for the various contract items of work and no additional compensation will be allowed therefor.

SECTION 5. GENERAL

SECTION 5-1. MISCELLANEOUS

5-1.01 PLANS AND WORKING DRAWINGS

When the specifications require working drawings to be submitted to the Division of Structure Design, the drawings shall be submitted to: Division of Structure Design, Documents Unit, Mail Station 9, 1801 30th Street, Sacramento, CA 95816, Telephone 916 227-8252.

5-1.015 LABORATORY

When a reference is made in the specifications to the "Laboratory," the reference shall mean the Division of Materials Engineering and Testing Services and the Division of Structural Foundations of the Department of Transportation, or established laboratories of the various Districts of the Department, or other laboratories authorized by the Department to test materials and work involved in the contract. When a reference is made in the specifications to the "Transportation Laboratory," the reference shall mean the Division of Materials Engineering and Testing Services and the Division of Structural Foundations, located at 5900 Folsom Boulevard, Sacramento, CA 95819, Telephone (916) 227-7000.

5-1.02 LABOR NONDISCRIMINATION

Attention is directed to the following Notice that is required by Chapter 5 of Division 4 of Title 2, California Code of Regulations.

NOTICE OF REQUIREMENT FOR NONDISCRIMINATION PROGRAM
(GOV. CODE, SECTION 12990)

Your attention is called to the "Nondiscrimination Clause", set forth in Section 7-1.01A(4), "Labor Nondiscrimination," of the Standard Specifications, which is applicable to all nonexempt State contracts and subcontracts, and to the "Standard California Nondiscrimination Construction Contract Specifications" set forth therein. The specifications are applicable to all nonexempt State construction contracts and subcontracts of $5000 or more.

5-1.03 INTEREST ON PAYMENTS

Interest shall be payable on progress payments, payments after acceptance, final payments, extra work payments, and claim payments as follows:

A. Unpaid progress payments, payment after acceptance, and final payments shall begin to accrue interest 30 days after the Engineer prepares the payment estimate.
B. Unpaid extra work bills shall begin to accrue interest 30 days after preparation of the first pay estimate following receipt of a properly submitted and undisputed extra work bill. To be properly submitted, the bill must be submitted within 7 days of the performance of the extra work and in conformance with the provisions in Section 9-1.03C, "Records," and Section 9-1.06, "Partial Payments," of the Standard Specifications. An undisputed extra work bill not submitted within 7 days of performance of the extra work will begin to accrue interest 30 days after the preparation of the second pay estimate following submittal of the bill.
C. The rate of interest payable for unpaid progress payments, payments after acceptance, final payments, and extra work payments shall be 10 percent per annum.
D. The rate of interest payable on a claim, protest or dispute ultimately allowed under this contract shall be 6 percent per annum. Interest shall begin to accrue 61 days after the Contractor submits to the Engineer information in sufficient detail to enable the Engineer to ascertain the basis and amount of said claim, protest or dispute.

The rate of interest payable on any award in arbitration shall be 6 percent per annum if allowed under the provisions of Civil Code Section 3289.

5-1.04 PUBLIC SAFETY

The Contractor shall provide for the safety of traffic and the public in conformance with the provisions in Section 7-1.09, "Public Safety," of the Standard Specifications and these special provisions.

The Contractor shall install temporary railing (Type K) between a lane open to public traffic and an excavation, obstacle or storage area when the following conditions exist:

A. Excavations**.—**The near edge of the excavation is 3.6 m or less from the edge of the lane, except:

1. Excavations covered with sheet steel or concrete covers of adequate thickness to prevent accidental entry by traffic or the public.
2. Excavations less than 0.3-m deep.
3. Trenches less than 0.3-m wide for irrigation pipe or electrical conduit, or excavations less than 0.3-m in diameter.
4. Excavations parallel to the lane for the purpose of pavement widening or reconstruction.
5. Excavations in side slopes, where the slope is steeper than 1:4 (vertical:horizontal).
6. Excavations protected by existing barrier or railing.

B. Temporarily Unprotected Permanent Obstacles**.—**The work includes the installation of a fixed obstacle together with a protective system, such as a sign structure together with protective railing, and the Contractor elects to install the obstacle prior to installing the protective system; or the Contractor, for the Contractor's convenience and with permission of the Engineer, removes a portion of an existing protective railing at an obstacle and does not replace such railing complete in place during the same day.

C. Storage Areas.—Material or equipment is stored within 3.6 m of the lane and the storage is not otherwise prohibited by the provisions of the Standard Specifications and these special provisions.

The approach end of temporary railing (Type K), installed in conformance with the provisions in this section "Public Safety" and in Section 7-1.09, "Public Safety," of the Standard Specifications, shall be offset a minimum of 4.6 m from the edge of the traffic lane open to public traffic. The temporary railing shall be installed on a skew toward the edge of the traffic lane of not more than 0.3-m transversely to 3 m longitudinally with respect to the edge of the traffic lane. If the 4.6-m minimum offset cannot be achieved, the temporary railing shall be installed on the 10 to 1 skew to obtain the maximum available offset between the approach end of the railing and the edge of the traffic lane, and an array of temporary crash cushion modules shall be installed at the approach end of the temporary railing.

Temporary railing (Type K) shall conform to the provisions in Section 12-3.08, "Temporary Railing (Type K)," of the Standard Specifications. Temporary railing (Type K), conforming to the details shown on 1999 Standard Plan T3, may be used. Temporary railing (Type K) fabricated prior to January 1, 1993, and conforming to 1988 Standard Plan B11-30 may be used, provided the fabrication date is printed on the required Certificate of Compliance.

Temporary crash cushion modules shall conform to the provisions in "Temporary Crash Cushion Module" of these special provisions.

Except for installing, maintaining and removing traffic control devices, whenever work is performed or equipment is operated in the following work areas, the Contractor shall close the adjacent traffic lane unless otherwise provided in the Standard Specifications and these special provisions:

Approach Speed of Public Traffic (Posted Limit) (Kilometers Per Hour)	Work Areas
Over 72 (45 Miles Per Hour)	Within 1.8 m of a traffic lane but not on a traffic lane
56 to 72 (35 to 45 Miles Per Hour)	Within 0.9-m of a traffic lane but not on a traffic lane

The lane closure provisions of this section shall not apply if the work area is protected by permanent or temporary railing or barrier.

When traffic cones or delineators are used to delineate a temporary edge of a traffic lane, the line of cones or delineators shall be considered to be the edge of the traffic lane, however, the Contractor shall not reduce the width of an existing lane to less than 3 m without written approval from the Engineer.

When work is not in progress on a trench or other excavation that required closure of an adjacent lane, the traffic cones or portable delineators used for the lane closure shall be placed off of and adjacent to the edge of the traveled way. The spacing of the cones or delineators shall be not more than the spacing used for the lane closure.

Suspended loads or equipment shall not be moved nor positioned over public traffic or pedestrians.

Full compensation for conforming to the provisions in this section "Public Safety," including furnishing and installing temporary railing (Type K) and temporary crash cushion modules, shall be considered as included in the contract prices paid for the various items of work involved and no additional compensation will be allowed therefor.

5-1.05 SURFACE MINING AND RECLAMATION ACT

Attention is directed to the Surface Mining and Reclamation Act of 1975, commencing in Public Resources Code, Mining and Geology, Section 2710, which establishes regulations pertinent to surface mining operations.

Material from mining operations furnished for this project shall only come from permitted sites in compliance with the Surface Mining and Reclamation Act of 1975.

The requirements of this section shall apply to materials furnished for the project, except for acquisition of materials in conformance with the provisions in Section 4-1.05, "Use of Materials Found on the Work," of the Standard Specifications.

5-1.06 REMOVAL OF ASBESTOS AND HAZARDOUS SUBSTANCES

When the presence of asbestos or hazardous substances are not shown on the plans or indicated in the specifications and the Contractor encounters materials which the Contractor reasonably believes to be asbestos or a hazardous substance as defined in Section 25914.1 of the Health and Safety Code, and the asbestos or hazardous substance has not been rendered harmless, the Contractor may continue work in unaffected areas reasonably believed to be safe. The Contractor shall immediately cease work in the affected area and report the condition to the Engineer in writing.

In conformance with Section 25914.1 of the Health and Safety Code, removal of asbestos or hazardous substances including exploratory work to identify and determine the extent of the asbestos or hazardous substance will be performed by separate contract.

If delay of work in the area delays the current controlling operation, the delay will be considered a right of way delay and the Contractor will be compensated for the delay in conformance with the provisions in Section 8-1.09, "Right of Way Delays," of the Standard Specifications.

5-1.07 YEAR 2000 COMPLIANCE

This contract is subject to Year 2000 Compliance for automated devices in the State of California.

Year 2000 compliance for automated devices in the State of California is achieved when embedded functions have or create no logical or mathematical inconsistencies when dealing with dates prior to and beyond 1999. The year 2000 is recognized and processed as a leap year. The product shall operate accurately in the manner in which the product was intended for date operation without requiring manual intervention.

The Contractor shall provide the Engineer a Certificate of Compliance from the manufacturer in conformance with the provisions in Section 6-1.07, "Certificates of Compliance," of the Standard Specifications for all automated devices furnished for the project.

5-1.08 SUBCONTRACTOR AND DVBE RECORDS

The Contractor shall maintain records of all subcontracts entered into with certified DVBE subcontractors and records of materials purchased from certified DVBE suppliers. The records shall show the name and business address of each DVBE subcontractor or vendor and the total dollar amount actually paid each DVBE subcontractor or vendor.

Upon completion of the contract, a summary of these records shall be prepared on Form CEM-2402 (S) and certified correct by the Contractor or the Contractor's authorized representative, and shall be furnished to the Engineer.

5-1.086 PERFORMANCE OF DVBE SUBCONTRACTORS AND SUPPLIERS

The DVBEs listed by the Contractor in response to the provisions in Section 2-1.04, "Submission of DVBE Information," and Section 3, "Award and Execution of Contract," of these special provisions, which are determined by the Department to be certified DVBEs, shall perform the work and supply the materials for which they are listed, unless the Contractor has received prior written authorization to perform the work with other forces or to obtain the materials from other sources.

Authorization to utilize other forces or sources of materials may be requested for the following reasons:

A. The listed DVBE, after having had a reasonable opportunity to do so, fails or refuses to execute a written contract, when the written contract, based upon the general terms, conditions, plans and specifications for the project, or on the terms of the subcontractor's or supplier's written bid, is presented by the Contractor.
B. The listed DVBE becomes bankrupt or insolvent.
C. The listed DVBE fails or refuses to perform the subcontract or furnish the listed materials.
D. The Contractor stipulated that a bond was a condition of executing a subcontract and the listed DVBE subcontractor fails or refuses to meet the bond requirements of the Contractor.

E. The work performed by the listed subcontractor is substantially unsatisfactory and is not in substantial conformance with the plans and specifications or the subcontractor is substantially delaying or disrupting the progress of the work.
F. The listed DVBE subcontractor is not licensed pursuant to the Contractor's License Law.
G. It would be in the best interest of the State.

The Contractor shall not be entitled to payment for the work or material unless it is performed or supplied by the listed DVBE or by other forces (including those of the Contractor) pursuant to prior written authorization of the Engineer.

5-1.09 SUBCONTRACTING

Attention is directed to the provisions in Section 8-1.01, "Subcontracting," of the Standard Specifications, Section 2, "Proposal Requirements and Conditions," Section 2-1.04, "Submission of DVBE Information," and Section 3, "Award and Execution of Contract," of these special provisions and these special provisions.

Pursuant to the provisions in Section 1777.1 of the Labor Code, the Labor Commissioner publishes and distributes a list of contractors ineligible to perform work as a subcontractor on a public works project. This list of debarred contractors is available from the Department of Industrial Relations web site at:

http://www.dir.ca.gov/DLSE/Debar.html.

The DVBE information furnished under Section 2-1.04, \"Submission of DVBE Information,\" of these special provisions is in addition to the subcontractor information required to be furnished in Section 8-1.01, "Subcontracting," and Section 2-1.054, "Required Listing of Proposed Subcontractors," of the Standard Specifications.

Section 10115 of the Public Contract Code requires the Department to implement provisions to establish a goal for Disabled Veteran Business Enterprise (DVBE) participation in highway contracts that are State funded. As a part of this requirement:

A. No substitution of a DVBE subcontractor shall be made at any time without the written consent of the Department, and
B. If a DVBE subcontractor is unable to perform successfully and is to be replaced, the Contractor shall make good faith efforts to replace the original DVBE subcontractor with another DVBE subcontractor.

The provisions in Section 2-1.02, "Disabled Veteran Business Enterprise (DVBE)," of these special provisions that DVBEs shall be certified on the date bids are opened does not apply to DVBE substitutions after award of the contract.

5-1.10 PROMPT PROGRESS PAYMENT TO SUBCONTRACTORS

Attention is directed to the provisions in Sections 10262 and 10262.5 of the Public Contract Code and Section 7108.5 of the Business and Professions Code concerning prompt payment to subcontractors.

5-1.11 PARTNERING

The State will promote the formation of a "Partnering" relationship with the Contractor in order to effectively complete the contract to the benefit of both parties. The purpose of this relationship will be to maintain cooperative communication and mutually resolve conflicts at the lowest possible management level.

The Contractor may request the formation of such a "Partnering" relationship by submitting a request in writing to the Engineer after approval of the contract. If the Contractor's request for "Partnering" is approved by the Engineer, scheduling of a "Partnering" workshop, selecting the "Partnering" facilitator and workshop site, and other administrative details shall be as agreed to by both parties.

The costs involved in providing a facilitator and a workshop site will be borne equally by the State and the Contractor. The Contractor shall pay all compensation for the wages and expenses of the facilitator and of the expenses for obtaining the workshop site. The State's share of such costs will be reimbursed to the Contractor in a change order written by the Engineer. Markups will not be added. All other costs associated with the "Partnering" relationship will be borne separately by the party incurring the costs.

The establishment of a "Partnering" relationship will not change or modify the terms and conditions of the contract and will not relieve either party of the legal requirements of the contract.

5-1.12 DISPUTE REVIEW BOARD

To assist in the resolution of disputes or potential claims arising out of the work of this project, a Dispute Review Board, hereinafter referred to as the "DRB," shall be established by the Engineer and Contractor cooperatively upon approval of the contract. The DRB is intended to assist the contract administrative claims resolution process as specified in the provisions in

Section 9-1.04, "Notice of Potential Claim," and Section 9-1.07B, "Final Payment and Claims," of the Standard Specifications. The DRB shall not serve as a substitute for provisions in the specifications in regard to filing potential claims. The requirements and procedures established in this special provision shall be considered as an essential prerequisite to filing a claim, for arbitration or for litigation prior or subsequent to project completion.

The DRB shall be utilized when dispute or potential claim resolution at the project level is unsuccessful. The DRB shall function until the day of acceptance of the contract, at which time the work of the DRB will cease except for completion of unfinished dispute hearings and reports. After acceptance of the contract, disputes or potential claims that the Contractor wants to pursue that have not been settled, shall be stated or restated, by the Contractor, in response to the Proposed Final Estimate within the time limits provided in Section 9-1.07B, "Final Payment and Claims," of the Standard Specifications. The State will review those claims in conformance with the provisions in Section 9-1.07B of the Standard Specifications. Following the completion of the State's administrative claims procedure, the Contractor may resort to arbitration in conformance with the provisions in Section 9-1.10, "Arbitration," of the Standard Specifications.

Disputes, as used in this section, shall include differences of opinion, properly noticed as provided hereinafter, between the State and Contractor on matters related to the work and other subjects considered by the State or Contractor, or by both, to be of concern to the DRB on this project, except matters relating to Contractor, subcontractor or supplier claims not actionable against the State as specified in these special provisions. Whenever the term "dispute" or "disputes" is used herein, it shall be deemed to include potential claims as well as disputes.

The DRB shall serve as an advisory body to assist in the resolution of disputes between the State and the Contractor, hereinafter referred to as the "parties." The DRB shall consider disputes referred to it, and furnish written reports containing findings and recommendations pertaining to those disputes, to the parties to aid in resolution of the differences between them. DRB findings and recommendations are not binding on the parties.

The DRB shall consist of one member selected by the State, one member selected by the Contractor, and a third member selected by the first 2 members and approved by both the State and the Contractor. The third member shall act as DRB Chairperson.

The first 2 DRB members shall select a third DRB member subject to mutual approval of the parties or may mutually concur on a list of potentially acceptable third DRB members and submit the list to the parties for final selection and approval of the third member. The goal in selection of the third member is to complement the professional experience of the first 2 members and to provide leadership for the DRB's activities.

No DRB member shall have prior direct involvement in this contract. No member shall have a financial interest in this contract or the parties thereto, within a period of 6 months prior to award of this contract or during the contract, except as follows:

A. Compensation for services on this DRB.
B. Ownership interest in a party or parties, documented by the prospective DRB member, that has been reviewed and determined in writing by the State to be sufficiently insignificant to render the prospective member acceptable to the State.
C. Service as a member of other Dispute Review Boards on other contracts.
D. Retirement payments or pensions received from a party that are not tied to, dependent on or affected by the net worth of the party.
E. The above provisions apply to parties having a financial interest in this contract, including but not limited to contractors, subcontractors, suppliers, consultants, and legal and business services.

DRB members shall be especially knowledgeable in the type of construction and contract documents potentially anticipated by the contract. The members shall discharge their responsibilities impartially and as an independent body considering the facts and circumstances related to the matters under consideration, applicable laws and regulations, and the pertinent provisions of the contract.

The State and the Contractor shall select their respective DRB members, in conformance with the terms and conditions of the Dispute Review Board Agreement and these special provisions, within 45 days of the approval of the contract. Each party shall provide written notification to the other of the name of their selected DRB member along with the prospective member's written disclosure statement.

Before their appointments are final, the first 2 prospective DRB members shall submit complete disclosure statements to both the State and the Contractor. The statement shall include a resume of the prospective member's experience, together with a declaration describing past, present, and anticipated or planned future relationships, including indirect relationships through the prospective member's primary or full-time employer, to this project and with the parties involved in this construction contract, including, but not limited to, relevant subcontractors or suppliers to the parties, the parties' principals or the parties' counsel. The DRB members shall also include a full disclosure of close professional or personal relationships with all key members of the parties to the contract. Either the Contractor or the State may object to the others nominee and that person will not be selected for the DRB. No reason need be given for the first objection. Objections to subsequent nominees must be based on a specific breech or violation of nominee responsibilities under this specification. A different

person shall then be nominated within 14 Days. The third DRB member shall supply a full disclosure statement to the first 2 DRB members and to the parties prior to appointment. Either party may reject any of the 3 prospective DRB members who fail to fully comply with all required employment and financial disclosure conditions of DRB membership as described in the Dispute Review Board Agreement and herein. A copy of the Dispute Review Board Agreement is included in this special provision.

The first duty of the State and Contractor selected members of the DRB is to select and recommend prospective third member(s) to the parties for final selection and approval. The first 2 DRB members shall proceed with the selection of the third DRB member immediately upon receiving written notification from the State of their selection, and shall provide their recommendation simultaneously to the parties within 14 days of the notification.

An impasse shall be considered to have been reached if the parties are unable to approve a third member within 14 days of receipt of the recommendation of the first 2 DRB members, or if the first 2 members are unable to agree upon a recommendation within the 14 day time limit allowed in the preceding paragraph. In the event of an impasse in selection of the third DRB member, the State and the Contractor shall each propose 3 candidates for the third position. The parties shall select the candidates proposed under this paragraph from the current list of arbitrators certified by the Public Works Contract Arbitration Committee created by Article 7.2 (commencing with Section 10245) of the State Contract Act. The first 2 DRB members shall then select one of the 6 proposed candidates in a blind draw.

The Contractor, the State, and the 3 members of the DRB shall complete and adhere to the Dispute Review Board Agreement in administration of this DRB within 14 days of the parties' concurrence in the selection of the third member. The State authorizes the Engineer to execute and administer the terms of the Agreement. The person(s) designated by the Contractor as authorized to execute Contract Change Orders shall be authorized to execute and administer the terms of this agreement, or to delegate the authority in writing. The operation of the DRB shall be in conformance with the terms of the Dispute Review Board Agreement.

The State and the Contractor shall bear the costs and expenses of the DRB equally. Each DRB board member shall be compensated at an agreed rate of $1,000 per day if time spent per meeting, including on-site time plus one hour of travel time, is greater than 4 hours. Each DRB board member shall be compensated at an agreed rate of $600 per day if time spent per meeting, including on-site time plus one hour of travel time, is less than or equal to 4 hours. The agreed rates shall be considered full compensation for on-site time, travel expenses, transportation, lodging, time for travel and incidentals for each day, or portion thereof, that the DRB member is at an authorized DRB meeting. No additional compensation will be made for time spent by DRB members in review and research activities outside the official DRB meetings unless that time, (such as time spent evaluating and preparing recommendations on specific issues presented to the DRB), has been specifically agreed to in advance by the State and Contractor. Time away from the project, that has been specifically agreed to in advance by the parties, will be compensated at an agreed rate of $100 per hour. The agreed amount of $100 per hour shall include all incidentals including expenses for telephone, fax, and computer services. Members serving on more than one DRB, regardless of the number of meetings per day, shall not be paid more than the all inclusive rate per day or rate per hour for an individual project. The State will provide, at no cost to the Contractor, administrative services such as conference facilities and secretarial services to the DRB. These special provisions and the Dispute Review Board Agreement state provisions for compensation and expenses of the DRB. DRB members shall be compensated at the same daily and hourly rate. The Contractor shall make direct payments to each DRB member for their participation in authorized meetings and approved hourly rate charges from invoices submitted by each DRB member. The State will reimburse the Contractor for its share of the costs. There will be no markups applied to expenses connected with the DRB, either by the DRB members or by the Contractor when requesting payment of the State's share of DRB expenses.

Service of a DRB member may be terminated at any time with not less than 14 days notice as follows:

A. The State may terminate service of the State appointed member.
B. The Contractor may terminate service of the Contractor appointed member.
C. Upon the written recommendation of the State and Contractor members for the removal of the third member.
D. Upon resignation of a member.

When a member of the DRB is replaced, the replacement member shall be appointed in the same manner as the replaced member was appointed. The appointment of a replacement DRB member will begin promptly upon determination of the need for replacement and shall be completed within 14 days. Changes in either of the DRB members chosen by the two parties will not require re-selection of the third member, unless both parties agree to such re-selection in writing. The Dispute Review Board Agreement shall be amended to reflect the change of a DRB member.

The following procedure shall be used for dispute resolution:

A. If the Contractor objects to any decision, act or order of the Engineer, the Contractor shall give written notice of potential claim in conformance with the provisions in Section 9-1.04, "Notice of Potential Claim," of the Standard Specifications, including provision of applicable cost documentation; or file written protests or notices pursuant to

Section 4-1.03A, "Procedure and Protest," Section 8-1.06, "Time of Completion," Section 8-1.07, "Liquidated Damages," or Section 8-1.10, "Utility and Non-Highway Facilities," of the Standard Specifications.

B. The Engineer will respond, in writing, to the Contractor's written protest or notice within 14 days of receipt of the written protest or notice.

C. Within 14 days after receipt of the Engineer's written response, the Contractor shall, if the Contractor still objects, file a written reply with the Engineer, stating clearly and in detail the basis of the objection.

D. Following the Contractor's objection to the Engineer's decision, the Contractor shall refer the dispute to the DRB if the Contractor wishes to further pursue the objection to the Engineer's decision. The Contractor shall make the referral in writing to the DRB, simultaneously copied to the State, within 21 days after receipt of the written reply from the Engineer. The written dispute referral shall describe the disputed matter in individual discrete segments so that it will be clear to both parties and the DRB what discrete elements of the dispute have been resolved, and which remain unresolved.

E. The Contractor, by failing to submit the written notice of referral of the matter to the DRB, within 21 days after receipt of the State's written reply, waives future claims on the matter in contention.

F. The Contractor and the State shall each be afforded an opportunity to be present and to be heard by the DRB, and to offer evidence. Either party furnishing written evidence or documentation to the DRB must furnish copies of such information to the other party a minimum of 14 days prior to the date the DRB is scheduled to convene the hearing for the dispute. Either party shall produce such additional evidence as the DRB may deem necessary to reach an understanding and determination of the dispute. The party furnishing additional evidence shall furnish copies of such additional evidence to the other party at the same time the evidence is provided to the DRB. The DRB will not consider evidence not furnished in conformance with the terms specified herein.

G. The DRB shall furnish a report, containing findings and recommendations as described in the Dispute Review Board Agreement, in writing to both the State and the Contractor. The DRB shall complete its reports, including minority opinion, if any, and submit them to the parties within 30 days of the DRB hearing, except that time extensions may be granted at the request of the DRB with the written concurrence of both parties. The report shall include the facts and circumstances related to the matters under consideration, applicable laws and regulations, the pertinent provisions of the Contract and the actual costs and time incurred as shown on the Contractor's cost accounting records.

H. Within 30 days after receiving the DRB's report, both the State and the Contractor shall respond to the DRB in writing signifying that the dispute is either resolved or remains unresolved. Failure to provide the written response within the time specified, or a written rejection of the DRB's recommendation presented in the report by either party, shall conclusively indicate that the party(s) failing to respond accepts the DRB recommendation. Immediately after responses have been received by both parties, the DRB will provide copies of both responses to the parties simultaneously. Either party may request clarification of elements of the DRB's report from the DRB prior to responding to the report. The DRB will consider any clarification request only if submitted within 10 days of receipt of the DRB's report, and if submitted simultaneously in writing to both the DRB and the other party. Each party may submit only one request for clarification for any individual DRB report. The DRB shall respond, in writing, to requests for clarification within 10 days of receipt of such requests.

I. The DRB's recommendations, stated in the DRB's reports, are not binding on either party. Either party may seek a reconsideration of a recommendation of the DRB. The DRB shall only grant a reconsideration based upon submission of new evidence and if the request is submitted within the 30-day time limit specified for response to the DRB's written report. Each party may submit only one request for reconsideration regarding an individual DRB recommendation.

J. If the State and the Contractor are able to resolve their dispute with the aid of the DRB's report, the State and Contractor shall promptly accept and implement the recommendations of the DRB.

K. The State or the Contractor shall not call members who served on the DRB for this contract as witnesses in arbitration proceedings which may arise from this contract, and all documents created by the DRB shall be inadmissible as evidence in subsequent arbitration proceedings, except the DRB's final written reports on each issue brought before it.

L. The State and Contractor shall jointly indemnify and hold harmless the DRB members from and against all claims, damages, losses, and expenses, including but not limited to attorney's fees, arising out of and resulting from the findings and recommendations of the DRB.

M. The DRB members shall have no claim against the State or the Contractor, or both, from claimed harm arising out of the parties' evaluations of the DRB's report.

DISPUTES INVOLVING SUBCONTRACTOR CLAIMS

For purposes of this section, a "subcontractor claim" shall include any claim by a subcontractor (including also any pass through claims by a lower tier subcontractor or supplier) against the Contractor that is actionable by the Contractor against the Department which arises from the work, services, or materials provided or to be provided in connection with the contract.

If the Contractor determines to pursue a dispute against the Department that includes a subcontractor claim, the dispute shall be processed and resolved in conformance with these special provisions and in conformance with the following:

A. The Contractor shall identify clearly in submissions pursuant to this section, that portion of the dispute that involves a subcontractor claim or claims.
B. The Contractor shall include, as part of its submission pursuant to Step 4 above, a certification (False Claims Act Certification) by the subcontractor's or supplier's officer, partner, or authorized representative with authority to bind the subcontractor and with direct knowledge of the facts underlying the subcontractor claim. The Contractor shall submit a certification that the subcontractor claim is acknowledged and forwarded by the Contractor. The form for these certifications are available from the Engineer.
C. At any DRB meeting on a dispute that includes one or more subcontractor claims, the Contractor shall require that each subcontractor that is involved in the dispute have present an authorized representative with actual knowledge of the facts underlying the subcontractor claim to assist in presenting the subcontractor claim and to answer questions raised by the DRB members or the Department's representatives.
D. Failure by the Contractor to declare a subcontractor claim on behalf of its subcontractor (including lower tier subcontractors' and suppliers' pass through claims) at the time of submission of the Contractor's claims, as provided hereunder, shall constitute a release of the Department by the Contractor on account of such subcontractor claim.
E. The Contractor shall include in all subcontracts under this contract that subcontractors and suppliers of any tier (a) agree to submit subcontractor claims to the Contractor in a proper form and in sufficient time to allow processing by the Contractor in conformance with the Dispute Review Board resolution specifications; (b) agree to be bound by the terms of the Dispute Review Board provisions to the extent applicable to subcontractor claims; (c) agree that, to the extent a subcontractor claim is involved, completion of all steps required under these Dispute Review Board special provisions shall be a condition precedent to pursuit by the subcontractor of other remedies permitted by law, including without limitation of a lawsuit against the Contractor; and (d) agree that the existence of a dispute resolution process for disputes involving subcontractor claims shall not be deemed to create any claim, right, or cause of action by any subcontractor or supplier against the Department.

Notwithstanding the foregoing, this Dispute Review Board special provision shall not apply to, and the DRB shall not have the authority to consider, subcontractor claims between the subcontractor(s) or supplier(s) and the Contractor that is not actionable by the Contractor against the Department.

A copy of the "Dispute Review Board Agreement" to be executed by the Contractor, State and the 3 DRB members after approval of the contract follows:

Form 6202 Rev (01-05-98)

DISPUTE REVIEW BOARD AGREEMENT

_____
(Contract Identification)

Contract No. _____

THIS DISPUTE REVIEW BOARD AGREEMENT, hereinafter called "AGREEMENT", made and entered into this _____ day of _____, _____, between the State of California, acting through the California Department of Transportation and the Director of Transportation, hereinafter called the "STATE," _____ _____ hereinafter called the "CONTRACTOR," and the Dispute Review Board, hereinafter called the "DRB" consisting of the following members:

_____ ,
(Contractor Appointee)

_____ ,
(State Appointee)

and _____
(Third Person)

WITNESSETH, that

WHEREAS, the STATE and the CONTRACTOR, hereinafter called the "parties," are now engaged in the construction on the State Highway project referenced above; and

WHEREAS, the special provisions for the above referenced contract provides for the establishment and operation of the DRB to assist in resolving disputes; and

WHEREAS, the DRB is composed of three members, one selected by the STATE, one selected by the CONTRACTOR, and the third member selected by the other two members and approved by the parties;

NOW THEREFORE, in consideration of the terms, conditions, covenants, and performance contained herein, or attached and incorporated and made a part hereof, the STATE, the CONTRACTOR, and the DRB members hereto agree as follows:

SECTION I DESCRIPTION OF WORK

To assist in the resolution of disputes between the parties, the contract provides for the establishment and the operation of the DRB. The intent of the DRB is to fairly and impartially consider disputes placed before it and provide written recommendations for resolution of these disputes to both parties. The members of this DRB shall perform the services necessary to participate in the DRB's actions as designated in Section II, Scope of Work.

SECTION II SCOPE OF WORK

The scope of work of the DRB includes, but is not limited to, the following:

A. OBJECTIVE

The principal objective of the DRB is to assist in the timely resolution of disputes between the parties arising from performance of this contract. It is not intended for either party to default on their normal responsibility to amicably and fairly settle their differences by indiscriminately assigning them to the DRB. It is intended that the mere existence of the DRB will encourage the parties to resolve disputes without resorting to this review procedure. But when a dispute which is serious enough to warrant the DRB's review does develop, the process for prompt and efficient action will be in place.

B. PROCEDURES

The DRB shall render written reports on disputes between the parties arising from the construction contract. Prior to consideration of a dispute, the DRB shall establish rules and regulations that will govern the conduct of its business and reporting procedures in conformance with the requirements of the contract and the terms of this AGREEMENT. DRB recommendations, resulting from its consideration of a dispute, shall be furnished in writing to both parties. The recommendations shall be based on the pertinent contract provisions, and the facts and circumstances involved in the dispute. The recommendations shall find one responsible party in a dispute; shared or "jury" determinations shall not be rendered.

The DRB shall refrain from officially giving advice or consulting services to anyone involved in the contract. The individual members shall act in a completely independent manner and while serving as members of the DRB shall have no consulting business connections with either party or its principals or attorneys or other affiliates (subcontractors, suppliers, etc.) who have a beneficial interest in the contract.

During scheduled meetings of the DRB as well as during dispute hearings, DRB members shall refrain from expressing opinions on the merits of statements on matters under dispute or potential dispute. Opinions of DRB members expressed in private sessions shall be kept strictly confidential. Individual DRB members shall not meet with, or discuss contract issues with individual parties, except as directed by the DRB Chairperson. Such discussions or meetings shall be disclosed to both parties. Other discussions regarding the project between the DRB members and the parties shall be in the presence of all three members and both parties. Individual DRB members shall not undertake independent investigations of any kind pertaining to disputes or potential disputes, except with the knowledge of both parties and as expressly directed by the DRB Chairperson.

C. CONSTRUCTION SITE VISITS, PROGRESS MEETINGS AND FIELD INSPECTIONS

The DRB members shall visit the project site and meet with representatives of the parties to keep abreast of construction activities and to develop familiarity with the work in progress. Scheduled progress meetings shall be held at or near the project site. The DRB shall meet at least once at the start of the project, and at least once every 6 months thereafter. The frequency, exact time, and duration of additional site visits and progress meetings shall be as recommended by the DRB and approved by the parties consistent with the construction activities or matters under consideration and dispute. Each meeting shall consist of a round table discussion and a field inspection of the work being performed on the contract, if necessary. Each meeting shall be attended by representatives of both parties. The agenda shall generally be as follows:

1. Meeting opened by the DRB Chairperson.
2. Remarks by the STATE's representative.
3. A description by the CONTRACTOR's representative of work accomplished since the last meeting; the current schedule status of the work; and a forecast for the coming period.
4. An outline by the CONTRACTOR's representative of potential problems and a description of proposed solutions.
5. An outline by the STATE's representative of the status of the work as the STATE views it.
6. A brief description by the CONTRACTOR's or STATE's representative of potential claims or disputes which have surfaced since the last meeting.
7. A summary by the STATE's representative, the CONTRACTOR's representative, or the DRB of the status of past disputes and claims.

The STATE's representative will prepare minutes of all regular meetings and circulate them for revision and approval by all concerned.

The field inspection shall cover all active segments of the work, the DRB being accompanied by both parties' representatives. The field inspection may be waived upon mutual agreement of the parties.

D. DRB CONSIDERATION AND HANDLING OF DISPUTES

Upon receipt by the DRB of a written referral of a dispute, the DRB shall convene to review and consider the dispute. The DRB shall determine the time and location of DRB hearings, with due consideration for the needs and preferences of the parties while recognizing the paramount importance of speedy resolution of issues. If the matter is not urgent, it may be scheduled for the time of the next scheduled DRB visit to the project. For an urgent matter, and upon the request of either party, the DRB shall meet at its earliest convenience.

Normally, hearings shall be conducted at or near the project site. However, any location which would be more convenient and still provide required facilities and access to necessary documentation shall be satisfactory.

Both parties shall be given the opportunity to present their evidence at these hearings. It is expressly understood that the DRB members are to act impartially and independently in the consideration of the contract provisions, and the facts and conditions surrounding any dispute presented by either party, and that the recommendations concerning any such dispute are advisory and nonbinding on the parties.

The DRB may request that written documentation and arguments from both parties be sent to each DRB member, through the DRB Chairperson, for review before the hearing begins. A party furnishing written documentation to the DRB shall furnish copies of such information to the other party at the same time that such information is supplied to the DRB.

DRB hearings shall be informal. There shall be no testimony under oath or cross-examination. There shall be no reporting of the procedures by a shorthand reporter or by electronic means. Documents and verbal statements shall be received by the DRB in conformance with acceptance standards established by the DRB. These standards need not comply with prescribed legal laws of evidence.

The third DRB member shall act as Chairperson for dispute hearings and all other DRB activities. The parties shall have a representative at all hearings. Failure to attend a duly noticed meeting by either of the parties shall be conclusively considered by the DRB as indication that the non-attending party considers written submittals as their entire and complete argument. The claimant shall discuss the dispute, followed by the other party. Each party shall then be allowed one or more rebuttals until all aspects of the dispute are thoroughly covered. DRB members may ask questions, seek clarification, or request further data from either of the parties. The DRB may request from either party documents or information that would assist the DRB in making its findings and recommendations including, but not limited to, documents used by the CONTRACTOR in preparing the bid for the project. A refusal by a party to provide information requested by the DRB may be considered by the DRB as an indication that the requested material would tend to disprove that party's position. Claims shall not necessarily be computed by merely subtracting bid price from the total cost of the affected work. However, if claims are based on the "total cost method," then, to be considered by the DRB, they shall be supported by evidence furnished by the CONTRACTOR that (1) the nature of the dispute(s) makes it impossible or impracticable to determine costs with a reasonable degree of accuracy, (2) the CONTRACTOR's bid estimate was realistic, (3) the CONTRACTOR's actual costs were reasonable, and (4) the CONTRACTOR was not responsible for the added expenses. As to claims based on the CONTRACTOR's field or home office accounting records, those claims shall be supported by an audit report of an independent Certified Public Accountant unless the contract includes special provisions that provide for an alternative method to calculate unabsorbed home office overhead. Any of those claims shall also be subject to audit by the DRB with the concurrence of the parties. In large or complex cases, additional hearings may be necessary in order to consider all the evidence presented by both parties. All involved parties shall maintain the confidentiality of all documents and information, as provided in this AGREEMENT.

During dispute hearings, no DRB member shall express an opinion concerning the merit of any facet of the case. DRB deliberations shall be conducted in private, with interim individual views kept strictly confidential.

After hearings are concluded, the DRB shall meet in private and reach a conclusion supported by 2 or more members. Private sessions of the DRB may be held at a location other than the job site or by electronic conferencing as deemed appropriate, in order to expedite the process.

The DRB's findings and recommendations, along with discussion of reasons therefor, shall then be submitted as a written report to both parties. Recommendations shall be based on the pertinent contract provisions, applicable laws and regulations, and facts and circumstances related to the dispute. The report shall be thorough in discussing the facts considered, the contract language, law or regulation viewed by the DRB as pertinent to the issues, and the DRB's interpretation and philosophy in arriving at its conclusions and recommendations. The DRB's report shall stand on its own, without attachments or appendices. The DRB chairman shall complete and furnish a summary report to the DRB Program Manager, Construction Program, MS 44, P.O. Box 942874, Sacramento, CA 94274.

With prior written approval of both parties, the DRB may obtain technical services necessary to adequately review the disputes presented, including audit, geotechnical, schedule analysis and other services. The parties' technical staff may supply those services as appropriate. The cost of technical services, as agreed to by the parties, shall be borne equally by the 2 parties as specified in an approved contract change order. The CONTRACTOR will not be entitled to markups for the payments made for these services.

The DRB shall resist submittal of incremental portions of information by either party, in the interest of making a fully-informed decision and recommendation.

The DRB shall make every effort to reach a unanimous decision. If this proves impossible, the dissenting member shall prepare a minority opinion, which shall be included in the DRB's report.

Although both parties should place weight upon the DRB's recommendations, they are not binding. Either party may appeal a recommendation to the DRB for reconsideration. However, reconsideration shall only be allowed when there is new evidence to present, and the DRB shall accept only one appeal from each party pertaining to an individual DRB recommendation. The DRB shall hear appeals in conformance with the terms described in the Section entitled "Dispute Review Board" in the special provisions.

E. DRB MEMBER REPLACEMENT

Should the need arise to appoint a replacement DRB member, the replacement DRB member shall be appointed in the same manner as the original DRB members were appointed. The selection of a replacement DRB member shall begin promptly upon notification of the necessity for a replacement and shall be completed within 14 days. This AGREEMENT will be amended to indicate change in DRB membership.

SECTION III CONTRACTOR RESPONSIBILITIES

The CONTRACTOR shall furnish to each DRB member one copy of pertinent documents which are or may become necessary for the DRB to perform their function. Pertinent documents are drawings or sketches, calculations, procedures, schedules, estimates, or other documents which are used in the performance of the work or in justifying or substantiating the CONTRACTOR's position. The CONTRACTOR shall also furnish a copy of such pertinent documents to the STATE, in conformance with the terms outlined in the special provisions.

SECTION IV STATE RESPONSIBILITIES

The STATE will furnish the following services and items:

A. CONTRACT RELATED DOCUMENTS

The STATE will furnish to each DRB member one copy of Notice to Contractors and Special Provisions, Proposal and Contract, Plans, Standard Specifications, and Standard Plans, change orders, written instructions issued by the STATE to the CONTRACTOR, or other documents pertinent to any dispute that has been referred to the DRB and necessary for the DRB to perform its function.

B. COORDINATION AND SERVICES

The STATE, through the Engineer, will, in cooperation with the CONTRACTOR, coordinate the operations of the DRB. The Engineer will arrange or provide conference facilities at or near the project site and provide secretarial and copying services to the DRB without charge to the CONTRACTOR.

SECTION V TIME FOR BEGINNING AND COMPLETION

Once established, the DRB shall be in operation until the day of acceptance of the contract. The DRB members shall not begin work under the terms of this AGREEMENT until authorized in writing by the STATE.

SECTION VI PAYMENT

A. ALL INCLUSIVE RATE PAYMENT

The STATE and the CONTRACTOR shall bear the costs and expenses of the DRB equally. Each DRB board member shall be compensated at an agreed rate of $1,000 per day if time spent per meeting, including on-site time plus one hour of travel time, is greater than 4 hours. Each DRB board member shall be compensated at an agreed rate of $600 per day if time spent per meeting, including on-site time plus one hour of travel time, is less than or equal to 4 hours. The agreed rates shall be considered full compensation for on-site time, travel expenses, transportation, lodging, time for travel and incidentals for each day, or portion thereof, that the DRB member is at an authorized DRB meeting. No additional compensation will be made for time spent by DRB members in review and research activities outside the official DRB meetings unless that time has been specifically agreed to in advance by the STATE and CONTRACTOR. Time away from the project, that has been specifically agreed to in advance by the parties, will be compensated at an agreed rate of $100 per hour. The agreed amount of $100 per hour shall include all incidentals including expenses for telephone, fax, and computer services. Members serving on more than one DRB, regardless of the number of meetings per day, shall not be paid more than the all inclusive rate per day or rate per hour for an individual project. The STATE will provide, at no cost to the CONTRACTOR, administrative services such as conference facilities and secretarial services to the DRB.

B. PAYMENTS

DRB members shall be compensated at the same rate. The CONTRACTOR shall make direct payments to each DRB member for their participation in authorized meetings and approved hourly rate charges from invoices submitted by each DRB member. The STATE will reimburse the CONTRACTOR for its share of the costs of the DRB.

The DRB members may submit invoices to the CONTRACTOR for partial payment for work performed and services rendered for their participation in authorized meetings not more often than once per month during the progress of the work. The invoices shall be in a format approved by the parties and accompanied by a general description of activities performed during that billing period. Payment for hourly fees, at the agreed rate, shall not be paid to a DRB member until the amount and extent of those fees are approved by the STATE and CONTRACTOR.

Invoices shall be accompanied by original supporting documents, which the CONTRACTOR shall include with the extra work billing when submitting for reimbursement of the STATE's share of cost from the STATE. The CONTRACTOR will be reimbursed for one-half of approved costs of the DRB. No markups will be added to the CONTRACTOR's payment.

C. INSPECTION OF COSTS RECORDS

The DRB members and the CONTRACTOR shall keep available for inspection by representatives of the STATE and the United States, for a period of 3 years after final payment, the cost records and accounts pertaining to this AGREEMENT. If any litigation, claim, or audit arising out of, in connection with, or related to this contract is initiated before the expiration of the 3–year period, the cost records and accounts shall be retained until such litigation, claim, or audit involving the records is completed.

SECTION VII ASSIGNMENT OF TASKS OF WORK

The DRB members shall not assign the work of this AGREEMENT.

SECTION VIII TERMINATION OF AGREEMENT, THE DRB, AND DRB MEMBERS

DRB members may resign from the DRB by providing not less than 14 days written notice of the resignation to the STATE and CONTRACTOR. DRB members may be terminated by their original appointing power, in conformance with the terms of the contract.

SECTION IX LEGAL RELATIONS

The parties hereto mutually understand and agree that the DRB member in the performance of duties on the DRB, is acting in the capacity of an independent agent and not as an employee of either party.

No party to this AGREEMENT shall bear a greater responsibility for damages or personal injury than is normally provided by Federal or State of California Law.

Notwithstanding the provisions of this contract that require the CONTRACTOR to indemnify and hold harmless the STATE, the parties shall jointly indemnify and hold harmless the DRB members from and against all claims, damages, losses, and expenses, including but not limited to attorney's fees, arising out of and resulting from the findings and recommendations of the DRB.

SECTION X CONFIDENTIALITY

The parties hereto mutually understand and agree that all documents and records provided by the parties in reference to issues brought before the DRB, which documents and records are marked "Confidential - for use by the DRB only," shall be kept in confidence and used only for the purpose of resolution of subject disputes, and for assisting in development of DRB findings and recommendations; that such documents and records will not be utilized or revealed to others, except to officials of the parties who are authorized to act on the subject disputes, for any purposes, during the life of the DRB. Upon

termination of this AGREEMENT, said confidential documents and records, and all copies thereof, shall be returned to the parties who furnished them to the DRB. However, the parties understand that such documents shall be subsequently discoverable and admissible in court or arbitration proceedings unless a protective order has been obtained by the party seeking further confidentiality.

SECTION XI DISPUTES

Disputes between the parties hereto, including disputes between the DRB members and either party or both parties, arising out of the work or other terms of this AGREEMENT, which cannot be resolved by negotiation and mutual concurrence between the parties, or through the administrative process provided in the contract, shall be resolved by arbitration as provided in Section 9-1.10, "Arbitration," of the Standard Specifications.

SECTION XII VENUE, APPLICABLE LAW, AND PERSONAL JURISDICTION

In the event that any party, including an individual member of the DRB, deems it necessary to institute arbitration proceedings to enforce any right or obligation under this AGREEMENT, the parties hereto agree that such action shall be initiated in the Office of Administrative Hearings of the State of California. The parties hereto agree that all questions shall be resolved by arbitration by application of California law and that the parties to such arbitration shall have the right of appeal from such decisions to the Superior Court in conformance with the laws of the State of California. Venue for the arbitration shall be Sacramento or any other location as agreed to by the parties.

SECTION XIII FEDERAL REVIEW AND REQUIREMENTS

On Federal-Aid contracts, the Federal Highway Administration shall have the right to review the work of the DRB in progress, except for private meetings or deliberations of the DRB.

Other Federal requirements in this agreement shall only apply to Federal-Aid contracts.

SECTION XIV CERTIFICATION OF THE CONTRACTOR, THE DRB MEMBERS, AND THE STATE

IN WITNESS WHEREOF, the parties hereto have executed this AGREEMENT as of the day and year first above written.

DRB MEMBER

By: _____

Title: _____

DRB MEMBER

By: _____

Title : _____

DRB MEMBER

By : _____

Title : _____

CONTRACTOR

By: _____

Title: _____

CALIFORNIA STATE DEPARTMENT
OF TRANSPORTATION

By: _____

Title: _____

5-1.13 PARTNERING

The State will promote the formation of a "Partnering" relationship with the Contractor in order to effectively complete the contract to the benefit of both parties. The purpose of this relationship will be to maintain cooperative communication and mutually resolve conflicts at the lowest possible management level.

A one-day “Training in Partnering Concepts” forum will be conducted regardless of whether the Contractor requests the formation of a “Partnering” relationship. The forum will be conducted locally for the Contractor and the Engineer’s project representatives. The Contractor shall be represented by a minimum of two representatives, one being the Contractor’s authorized representative pursuant to Section 5-1.06, “Superintendence,” of the Standard Specifications. If, upon the Contractor’s request, “Partnering” is approved by the Engineer, “Training in Partnering Concepts” shall be conducted prior to the “Partnering” workshop. Scheduling of “Training in Partnering Concepts,” selection of the Engineer’s representatives to

participate in “Training of Partnering Concepts,” and selection of the partnering concepts trainer and site shall be as determined by the Engineer.

The Contractor may request the formation of a "Partnering" relationship by submitting a request in writing to the Engineer after approval of the contract. If the Contractor's request for "Partnering" is approved by the Engineer, scheduling of a "Partnering" workshop, selecting the "Partnering" facilitator and workshop site, and other administrative details shall be as agreed to by both parties.

The costs involved in providing a trainer and site for the "Training in Partnering Concepts" forum will be borne by the State. The Contractor shall pay all compensation for the wages and expenses of the facilitator and of the expenses for obtaining the workshop site. The State will reimburse the Contractor for these costs as extra work in conformance with the provisions in Section 4-1.03D of the Standard Specifications. Full compensation for the wages and expenses of the Contractor's representatives, including travel costs, shall be considered as included in the contract prices paid for the various items of work and no additional compensation will be allowed therefor.

The costs involved in providing a “Partnering” facilitator and a workshop site will be borne equally by the State and the Contractor. The Contractor shall pay all compensation for the wages and expenses of the facilitator and of the expenses for obtaining the workshop site. The State's share of such costs will be reimbursed to the Contractor in a change order written by the Engineer.

Markups will not be added to the costs of “Training in Partnering Concepts” or the costs of providing a “Partnering” facilitator and workshop site. All other costs associated with the "Partnering" relationship will be borne separately by the party incurring the costs.

The establishment of a "Partnering" relationship will not change or modify the terms and conditions of the contract and will not relieve either party of the legal requirements of the contract.

5-1.14 USE OF DREDGED MATERIALS

The Contractor shall dispose all materials dredged from the San Francisco Bay upland.

Disposal of dredged material will be paid for as extra work as provided in Section 4-1.03D of the Standard Specifications, and will not be considered a special service as specified in Section 9-1.03B of the Standard Specifications.

5-1.15 COST REDUCTION INCENTIVE PROPOSAL

Section 5-1.14, "Cost Reduction Incentive," of the Standard Specifications is amended by adding the following paragraph:

Prior to preparing a cost reduction proposal, the Contractor shall request a meeting with the Engineer to discuss the proposal in concept and to determine whether the cost reduction proposal will be considered by the Department. Items of discussion will also include permit issues, impact on other projects, impact on the project schedule, traffic considerations, safety, health issues, design criteria, and review times required by the Department and other agencies. Determination by the Engineer that a cost reduction proposal will not be considered will be deemed rejection of the proposal.

5-1.16 TIDAL CONDITIONS AND ELEVATION DATUM

Attention is directed to Section 2-1.03, "Examination of Plans, Specifications, Contract, and Site of Work."

Tidal conditions may present significant problems in constructing the work as depicted in the contract plans. Tidal fluctuations may be severe and different from those shown in published tidal and current data due to differences in datum, winter runoff and other causes. Strong currents exist over portions of the project site. Limited time periods of slack water may restrict diving and other underwater activities.

The Contractor is responsible for being knowledgeable of such tidal difficulties, and no payment will be made by the State for any costs incurred by the Contractor in connection with the variations in actual tidal or current conditions during the course of this contract. Any reference to Mean Higher High and Mean Lower Low tides shall be understood to be an estimate used for permit purposes, actual mean tide data shall be determined by the Contractor.

All vertical control data are based on the National Geodetic Vertical Datum of 1929.

5-1.17 FORCE ACCOUNT PAYMENT

The second, third and fourth paragraphs of Section 9-1.03A, "Work Performed by Contractor," of the Standard Specifications, shall not apply.

Attention is directed to "Progress Schedule (Critical Path) of these special provisions.

To the total of the direct costs for work performed on a force account basis, computed as provided in Sections 9-1.03A(1), "Labor," 9-1.03A(2), "Materials," and 9-1.03A(3), "Equipment Rental," of the Standard Specifications, there will be added a markup of 25 percent to the cost of labor, 10 percent to the cost of materials, and 10 percent to the equipment

rental. These markups shall be applied to all work performed on a force account basis, regardless of whether the work revises the current contract completion date.

The above markups, together with payments made for time related overhead pursuant to "Overhead" of these special provisions, shall constitute full compensation for all overhead costs for work performed on a force account basis. These overhead costs shall be deemed to include all items of expense not specifically designated as cost or equipment rental in Sections 9-1.03A(1), "Labor," 9-1.03A(2), "Materials," and 9-1.03A(3), "Equipment Rental," of the Standard Specifications. The total payment made as provided above and in the first paragraph of Section 9-1.03A, "Work Performed by Contractor," shall be deemed to be the actual cost of the work performed on a force account basis, and shall constitute full compensation therefor. Full compensation for all overhead costs for work performed on a force account basis, and for which no adjustment is made to the quantity of time related overhead pursuant to "Overhead" of these special provisions, shall be considered as included in the markups specified above, and no additional compensation will be allowed therefor.

When extra work to be paid for on a force account basis is performed by a subcontractor, approved in accordance with the provisions in Section 8-1.01, “Subcontracting,” of the Standard Specifications, an additional markup of 5 percent will be added to the total cost of said extra work including all markups specified in this section "Force Account Payment". Said additional 5 percent markup shall reimburse the Contractor for additional administrative costs, and no other additional payment will be made by reason of performance of the extra work by a subcontractor.

5-1.18 OVERHEAD

The Contractor will be compensated for overhead in accordance with these special provisions.

Attention is directed to "Force Account Payment" and "Progress Schedule (Critical Path)" of these special provisions.

Section 9-1.08, "Adjustment of Overhead Costs," of the Standard Specifications shall not apply.

Time related overhead shall consist of those overhead costs, including field and home office overhead, that are in proportion to the time required to complete the work. Time related overhead costs shall not include costs that are not related to time, including but not limited to mobilization, licenses, permits, and any other charges incurred only once during duration of the contract.

The quantity of time related overhead to be measured for payment will be the number of working days specified in "Beginning of Work, Time of Completion and Liquidated Damages" of these special provisions, adjusted only as a result of suspensions and adjustments of time which revise the current contract completion date and which are also any of the following:

1) suspensions of work ordered in accordance with Section 8-1.05, "Temporary Suspension of Work," of the Standard Specifications, except:

    a) suspensions ordered due to the failure on the part of the Contractor to carry out orders given, or to perform any provision of the contract; and
    b) suspensions ordered due to unsuitable weather conditions;

2) extensions of time granted by the State in accordance with the provisions of the fifth paragraph of Section 8-1.07, "Liquidated Damages," of the Standard Specifications; or
3) reductions in contract time set forth in approved contract change orders, in accordance with Section 4-1.03, "Changes," of the Standard Specifications.

The contract price paid per working day for time related overhead shall include full compensation for time related overhead measured for payment as specified above, incurred by the Contractor and by any joint venture partner, subcontractor, supplier or other party associated with the Contractor.

No adjustment in compensation will be made for any increase or decrease in the quantities of time related overhead required, regardless of the reason for the increase or decrease. The provisions in Sections 4-1.03B, "Increased or Decreased Quantities" and 4-1.03C, "Changes in Character of the Work," of the Standard Specifications, shall not apply to time related overhead.

For the purpose of making partial payments pursuant to Section 9-1.06, “Partial Payments,” of the Standard Specifications, the number of working days to be paid for time related overhead in each monthly estimate will be the number of working days specified above to be measured for payment that occurred during that monthly estimate period. The amount earned per day for time related overhead shall be the contract unit price for time related overhead, or 15 percent of the original contract amount divided by the number of working days specified in "Beginning of Work, Time of Completion and Liquidated Damages" of these special provisions, whichever is the lesser.

After acceptance of the contract pursuant to Section 7-1.17, “Acceptance of Contract,” of the Standard Specifications, the amount, if any, of the contract item price for time related overhead not yet paid will be included for payment in the first

estimate made after acceptance of the contract in accordance with Section 9-1.07, “Payment after Acceptance,” of the Standard Specifications.

Full compensation for all overhead costs, including overhead costs for increases in the quantity of contract items of work; other than time related overhead measured and paid for as specified above, and other than overhead costs included in the markups specified in "Force Account Payment" of these special provisions; shall be considered as included in the various items of work and no additional compensation will be allowed therefor.

5-1.19 RELATIONS WITH SAN FRANCISCO BAY CONSERVATION DEVELOPMENT COMMISSION (BCDC)

This project is located within an area controlled by the BCDC. Permit has been issued covering work to be performed under this contract. The Contractor shall be fully informed of all rules, regulations and conditions of the permit that may govern the Contractor's operations in said area and shall conduct the Contractor's work accordingly. Said document shall be considered a part of, and shall become, an integral part of the special provisions and contract for this project.

Copies of the Permit may be obtained at the Department of Transportation, Plans and Bid Documents, Room 0200, Transportation Building, 1120 N Street, P.O. Box 942874, Sacramento, California 94274-0001, Telephone No. (916)654-4490, and are available for inspection at the Toll Bridge Program Duty Senior at District 04 Office, 111 Grand Avenue, Oakland, California 94612, telephone number (510) 286-5549, email duty_senior_tollbridge_district04@dot.ca.gov.

Any modifications to the permit which are proposed by the Contractor shall be submitted in writing to the Engineer for transmittal to the BCDC for their consideration.

When the Contractor is notified by the Engineer that a modification to the permit is under consideration, no work will be allowed on the proposed modification until the Department takes action on the proposed modification. Any modifications to any agreement between the Department of Transportation and BCDC shall be fully binding on the Contractor, and the provisions of this section shall be made a part of every subcontract executed pursuant to this contract.

Full compensation for conforming to the above requirements shall be considered as included in the contract prices paid for the various contract items of work and no additional compensation will be allowed therefor.

5-1.20 RELATIONS WITH US ARMY CORPS OF ENGINEERS

The location of this project is within an area controlled by the US Army Corps of Engineers. A permit has been issued covering work to be performed under this contract. The Contractor shall be fully informed of all rules, regulations, and conditions of the permit that may govern its operations in said area and shall conduct its work accordingly. Said document shall be considered a part of, and shall become, an integral part of the special provisions and contract for this project.

Copies of the permit may be obtained at the Department of Transportation, Plans and Bid Documents, Room 0200, Transportation Building, 1120 N Street, P.O. Box 942874, Sacramento, California 94274-0001, Telephone No. (916) 654-4490, and are available for inspection at the office of the Toll Bridge Duty Senior at District 04 Office, 111 Grand Ave., Oakland, CA 94623, telephone no. (510) 286-5549, email duty_senior_tollbridge_district04@dot.ca.gov.

Any modifications to the permit which are proposed by the Contractor shall be submitted in writing to the Engineer for transmittal to the Army Corps of Engineers for their consideration. No additional time or compensation will be allowed for delays caused by the Contractor's proposed modifications to the agreement between the Department of Transportation and the Army Corps of Engineers.

When the Contractor is notified by the Engineer that a modification to the permit is under consideration, no work will be allowed on the proposed modification until the Department takes action on the proposed modification. Any modifications to any agreement between the Department of Transportation and the Army Corps of Engineers shall be fully binding on the Contract, and the provisions of this section shall be made a part of every subcontract executed pursuant to his contract.

Full compensation for conforming to the above requirements shall be considered as included in the Contract prices paid for the various items of work and no additional compensation will be allowed therefor.

5-1.21 RELATIONS WITH U.S. COAST GUARD

The location of this project is within an area controlled by the U.S. Coast Guard (USCG). The Contractor shall be fully informed of all rules, regulations, and conditions that may govern the Contractor's operations and shall conduct the Contractor's work accordingly.

Attention is directed to Sections 7-1.01, "Laws To Be Observed," and 7-1.11, "Preservation of Property," of the Standard Specifications, and Section, "Navigational Lighting," elsewhere in these special provisions.

Work shall be such that free navigation of the waterway, navigable depths and channel widths are not impaired, except as otherwise allowed by the USCG.

Navigational Requirements

Within ten (10) working days of award of the contract, the Contractor shall notify the Engineer in writing, along with a drawing, of their proposed method for anchoring barges. The Engineer will transmit the Contractor's proposal to the USCG

for approval. The Contractor shall not anchor any barges until his procedure has been approved by the USCG. In the event that the required USCG approval, in the opinion of the Engineer, delays the Contractor's operations, the Contractor will be granted a time extension commensurate with the delay.

Should the Contractor during the progress of the work sink, lose, or throw overboard any material, plant, machinery or floatable debris which may be dangerous to or which will obstruct navigation, the Contractor shall give immediate notice to the proper authorities and, if required, shall mark or buoy such obstructions until they can be removed. Should he neglect or delay compliance with the above requirements, such obstructions shall be removed by the State and the cost of such removal will be deducted from any monies due to the Contractor or may be recovered under his bond.

The Contractor shall keep proper warning lights each night between the hours of sunset and sunrise upon all floating equipment connected with the work and upon all buoys which are of a size and in such location as to endanger or obstruct navigation.

All floating equipment and anchors must be marked in accordance with USCG Regulation CG-169.

Compliance on the part of the Contractor with the requirements of this Section shall not be construed as relieving the Contractor from his full responsibility for protecting and guarding the work from injury or from damage from any cause as specified under Section 7-1.016, "Contractor's Responsibility for the Work and Materials," of the Standard Specifications.

Full compensation for conforming to the requirements of this section shall be considered as included in the prices paid for the various contract items of work to which such drawings relate and no additional compensation will be allowed therefor.

5-1.22 AREAS FOR CONTRACTOR'S USE

The State will not provide terrestrial space for the Contractor’s use. Use of the Contractor's work areas and other State-owned property shall be at the Contractor's own risk. The State shall not be held liable for damage to or loss of materials or equipment located within these areas.

The Contractor shall remove the equipment, materials, and rubbish from the work areas and other State-owned property which the Contractor occupies and shall leave the areas in a presentable condition, in conformance with the provisions in Section 4-1.02, "Final Cleaning Up," of the Standard Specifications. No materials or liquids shall be placed inside the pipe piling.

The Contractor shall secure, at the Contractor's own expense, areas required for storage of plant, equipment, and materials, or for other purposes if sufficient area is not available to the Contractor within the contract limits.

5-1.23 CONSTRUCTION AREA LIGHTING

The Contractor shall furnish, install, maintain, and remove when no longer required, construction area lighting in accordance with these special provisions.

In all construction areas where work is to be performed during hours of darkness, the working areas shall be lighted in conformance with the minimum illumination intensities established by the California Division of Industrial Safety construction safety orders. The term hours of darkness shall be as defined Section 12-3.01, General," of the Standard Specifications. All lighting fixtures shall be mounted and directed in a manner precluding glare to approaching traffic, boat or ship traffic and visitor use areas.

All construction and warning signs, and construction area signs required for night time operations shall be illuminated during the hours of work. All electrical power shall be provided by the Contractor.

Full compensation for construction area lighting shall be considered as included in the contract price paid for the various items of work involved and no additional compensation will be allowed therefor.

5-1.24 UTILITIES

The Contractor shall make arrangements to obtain additional electrical power, water or compressed air or other utilities required for the Contractor's operations and shall make and maintain the necessary service connections at the Contractor's own expense. The Contractor shall not use any existing utilities on the Bay Bridge or within the contract limits, unless approved in writing by the Engineer.

5-1.25 SANITARY PROVISIONS

State sanitary facilities will not be available for use by the Contractor's employees.

5-1.26 BRIDGE TOLLS

Toll-free passage on the San Francisco-Oakland Bay Bridge will be granted only for cars, trucks and special construction equipment which are clearly marked on the exterior with the Contractor's identification and which are being operated by the Contractor exclusively for the project, and which are used for the purpose of transporting materials and workers directly to and from the project site.

The Contractor shall make application to the Engineer in advance for toll-free passage. The Contractor will be held accountable for the proper use of passes issued, and upon completion of the work, shall return unused passes to the Engineer.

Attention is directed to Section 23302, "Evasion of Toll," of the Vehicle Code.

5-1.27 ACCESS TO PROJECT SITE

Prospective bidders may make arrangements to visit the project site by contacting the Toll Bridge Program Duty Senior, at telephone (510) 286-5549, email duty_senior_tollbridge_district04@dot.ca.gov.

5-1.28 DRAWINGS

Attention is directed to Section 5-1.02, "Plans and Working Drawings," of the Standard Specifications and these special provisions.

When working drawings are required by these special provisions, the drawings shall be submitted in conformance with the provisions in Section 55-1.02, "Drawings," of the Standard Specifications and the following:

A. Working drawings shall be submitted to the Engineer at:

Office of the Resident Engineer
San Francisco Oakland Bay Bridge
Toll Plaza Administration Building, Room 1261
Oakland, California 94608
ATTN: Mr. Mark Woods

B. Working drawings shall not exceed 559 mm x 864 mm in size.
C. Microfilms are required of approved shop drawings and shall be only a 24x reduction.
D. Text size shall be nominally 2.8 mm high, minimum, for working drawings of 279 mm x 432 mm in size.
E. Text and details shall be legible and suitable for photocopying and reduction.

Working drawings will be required for:

Welding Quality Control Plan (WQCP).
Pile Stacking Plan, Pile Handling Plan and Connection Details.
Pile Guide Template.
Navigational lighting supporting mast and attachment details.

The Contractor shall submit 3 copies of manufacturer's catalog sheets and maintenance and operation booklets or instructions to the Engineer for the following:

Navigational Lighting assemblies.
Pile and Driving Data Form and Manufacturer's Specifications for Hammers.

5-1.29 PERMITS AND LICENSES

Attention is directed to Section 7-1.04, "Permits and Licenses," of the Standard Specifications and these special provisions.

The Department has obtained the following permits for this project:

A. San Francisco Bay Conservation Development Commission (BCDC).
B. US Army Corps of Engineers (ACOE).

Copies of these permits can be obtained at the Department of Transportation, Plans and Bid Documents Section, MS 26, 1120 N Street, Room 200, Sacramento, CA 95814, Telephone 916-654-4490 or may be seen at the office of the Toll Bridge Duty Senior, 111 Grand Ave., Oakland, CA 94623, Telephone (510) 286-5549, email duty_senior_tollbridge_disrict04@dot.ca.gov.

Full compensation for conforming to the requirements in these permits shall be considered as included in the prices paid for the various contract items of work and no additional compensation will be allowed therefor.

SECTION 6. (BLANK)
SECTION 7. (BLANK)
SECTION 8. MATERIALS
SECTION 8-1. MISCELLANEOUS

8-1.01 SUBSTITUTION OF NON-METRIC MATERIALS AND PRODUCTS

Only materials and products conforming to the requirements of the specifications shall be incorporated in the work. When metric materials and products are not available, and when approved by the Engineer, and at no cost to the State, materials and products in the inch-pound (Imperial) system which are of equal quality and of the required properties and characteristics for the purpose intended, may be substituted for the equivalent metric materials and products, subject to the following provisions:

A. Materials and products shown on the plans or in the special provisions as being equivalent may be substituted for the metric materials and products specified or detailed on the plans.
B. Before other non-metric materials and products will be considered for use the Contractor shall furnish, at the Contractor's expense, evidence satisfactory to the Engineer that the materials and products proposed for use are equal to or better than the materials and products specified or detailed on the plans. The burden of proof as to the quality and suitability of substitutions shall be upon the Contractor and the Contractor shall furnish necessary information as required by the Engineer. The Engineer will be the sole judge as to the quality and suitability of the substituted materials and products and the Engineer's decision will be final.
C. When the Contractor elects to substitute non-metric materials and products, including materials and products shown on the plans or in the special provisions as being equivalent, the list of sources of material as specified in Section 6-1.01, "Source of Supply and Quality of Materials," of the Standard Specification shall include a list of substitutions to be made and contract items involved. In addition, for a change in design or details the Contractor shall submit plans and working drawings in conformance with the provisions in Section 5-1.02, "Plans and Working Drawings," of the Standard Specifications.

Unless otherwise specified, the following substitutions of materials and products will be allowed:

SUBSTITUTION TABLE FOR SIZES OF HIGH STRENGTH STEEL FASTENERS
ASTM Designation: A 325M

METRIC SIZE SHOWN ON THE PLANS mm x thread pitch	IMPERIAL SIZE TO BE SUBSTITUTED inch
M16 x 2	5/8
M20 x 2.5	3/4
M22 x 2.5	7/8
M24 x 3	1
M27 x 3	1-1/8
M30 x 3.5	1-1/4
M36 x 4	1-1/2

SUBSTITUTION TABLE FOR PLAIN WIRE REINFORCEMENT, ASTM Designation: A 82

METRIC SIZE SHOWN ON THE PLANS mm^2	US CUSTOMARY UNITS SIZE TO BE SUBSTITUTED $inch^2$ x 100
MW9	W1.4
MW10	W1.6
MW13	W2.0
MW15	W2.3
MW19	W2.9
MW20	W3.1
MW22	W3.5
MW25	W3.9, except W3.5 in piles only
MW26	W4.0
MW30	W4.7
MW32	W5.0
MW35	W5.4
MW40	W6.2
MW45	W6.5
MW50	W7.8
MW55	W8.5, except W8.0 in piles only
MW60	W9.3
MW70	W10.9, except W11.0 in piles only
MW80	W12.4
MW90	W14.0
MW100	W15.5

SUBSTITUTION TABLE FOR BAR REINFORCEMENT

METRIC BAR DESIGNATION NUMBER SHOWN ON THE PLANS	EQUIVALENT IMPERIAL BAR DESIGNATION NUMBER TO BE SUBSTITUTED
13	4
16	5
19	6
22	7
25	8
29	9
32	10
36	11
43	14
57	18

No adjustment will be required in spacing or total number of reinforcing bars due to a difference in minimum yield strength between metric and non-metric bars.

The sizes in the following tables of materials and products are exact conversions of metric sizes of materials and products and are listed as acceptable equivalents:

CONVERSION TABLE FOR SIZES OF:

(1) STEEL FASTENERS FOR GENERAL APPLICATIONS, ASTM Designation: A 307 or AASHTO Designation: M 314, Grade 36 or 55, and

(2) HIGH STRENGTH STEEL FASTENERS, ASTM Designation: A 325 or A 449

METRIC SIZE SHOWN ON THE PLANS mm	EQUIVALENT IMPERIAL SIZE inch
6, or 6.35	1/4
8 or 7.94	5/16
10, or 9.52	3/8
11, or 11.11	7/16
13 or 12.70	1/2
14, or 14.29	9/16
16, or 15.88	5/8
19, or 19.05	3/4
22, or 22.22	7/8
24, 25, or 25.40	1
29, or 28.58	1-1/8
32, or 31.75	1-1/4
35, or 34.93	1-3/8
38 or 38.10	1-1/2
44, or 44.45	1-3/4
51, or 50.80	2
57, or 57.15	2-1/4
64, or 63.50	2-1/2
70 or 69.85	2-3/4
76, or 76.20	3
83, or 82.55	3-1/4
89 or 88.90	3-1/2
95, or 95.25	3-3/4
102, or 101.60	4

CONVERSION TABLE FOR NOMINAL THICKNESS OF SHEET METAL

UNCOATED HOT AND COLD ROLLED SHEETS		HOT-DIPPED ZINC COATED SHEETS (GALVANIZED)	
METRIC THICKNESS SHOWN ON THE PLANS mm	EQUIVALENT US STANDARD GAGE inch	METRIC THICKNESS SHOWN ON THE PLANS mm	EQUIVALENT GALVANIZED SHEET GAGE inch
7.94	0.3125	4.270	0.1681
6.07	0.2391	3.891	0.1532
5.69	0.2242	3.510	0.1382
5.31	0.2092	3.132	0.1233
4.94	0.1943	2.753	0.1084
4.55	0.1793	2.372	0.0934
4.18	0.1644	1.994	0.0785
3.80	0.1495	1.803	0.0710
3.42	0.1345	1.613	0.0635
3.04	0.1196	1.461	0.0575
2.66	0.1046	1.311	0.0516
2.28	0.0897	1.158	0.0456
1.90	0.0747	1.006 or 1.016	0.0396
1.71	0.0673	0.930	0.0366
1.52	0.0598	0.853	0.0336
1.37	0.0538	0.777	0.0306
1.21	0.0478	0.701	0.0276
1.06	0.0418	0.627	0.0247
0.91	0.0359	0.551	0.0217
0.84	0.0329	0.513	0.0202
0.76	0.0299	0.475	0.0187
0.68	0.0269	--------	--------
0.61	0.0239	--------	--------
0.53	0.0209	--------	--------
0.45	0.0179	--------	--------
0.42	0.0164	--------	--------
0.38	0.0149	--------	--------

CONVERSION TABLE FOR WIRE

METRIC THICKNESS SHOWN ON THE PLANS mm	EQUIVALENT USA STEEL WIRE THICKNESS inch	GAGE NO.
6.20	0.244	3
5.72	0.225	4
5.26	0.207	5
4.88	0.192	6
4.50	0.177	7
4.11	0.162	8
3.76	0.148	9
3.43	0.135	10
3.05	0.120	11
2.69	0.106	12
2.34	0.092	13
2.03	0.080	14
1.83	0.072	15
1.57	0.062	16
1.37	0.054	17
1.22	0.048	18
1.04	0.041	19
0.89	0.035	20

CONVERSION TABLE FOR PIPE PILES

METRIC SIZE SHOWN ON THE PLANS mm x mm	EQUIVALENT IMPERIAL SIZE inch x inch
PP 360 x 4.55	NPS 14 x 0.179
PP 360 x 6.35	NPS 14 x 0.250
PP 360 x 9.53	NPS 14 x 0.375
PP 360 x 11.12	NPS 14 x 0.438
PP 406 x 12.70	NPS 16 x 0.500
PP 460 x T	NPS 18 x T"
PP 508 x T	NPS 20 x T"
PP 559 x T	NPS 22 x T"
PP 610 x T	NPS 24 x T"
PP 660 x T	NPS 26 x T"
PP 711 x T	NPS 28 x T"
PP 762 x T	NPS 30 x T"
PP 813 x T	NPS 32 x T"
PP 864 x T	NPS 34 x T"
PP 914 x T	NPS 36 x T"
PP 965 x T	NPS 38 x T"
PP 1016 x T	NPS 40 x T"
PP 1067 x T	NPS 42 x T"
PP 1118 x T	NPS 44 x T"
PP 1219 x T	NPS 48 x T"
PP 1524 x T	NPS 60 x T"

The thickness in inches (T") represents an exact conversion of the metric thickness in millimeters (T).

CONVERSION TABLE FOR STRUCTURAL TIMBER AND LUMBER

METRIC MINIMUM DRESSED DRY, SHOWN ON THE PLANS mm x mm	METRIC MINIMUM DRESSED GREEN, SHOWN ON THE PLANS mm x mm	EQUIVALENT NOMINAL US SIZE inch x inch
19x89	20x90	1x4
38x89	40x90	2x4
64x89	65x90	3x4
89x89	90x90	4x4
140x140	143x143	6x6
140x184	143x190	6x8
184x184	190x190	8x8
235x235	241x241	10x10
286x286	292x292	12x12

CONVERSION TABLE FOR NAILS AND SPIKES

METRIC COMMON NAIL, SHOWN ON THE PLANS Length, mm Diameter, mm	METRIC BOX NAIL, SHOWN ON THE PLANS Length, mm Diameter, mm	METRIC SPIKE, SHOWN ON THE PLANS Length, mm Diameter, mm	EQUIVALENT IMPERIAL SIZE Penny-weight
50.80 2.87	50.80 2.51	_____	6d
63.50 3.33	63.50 2.87	_____	8d
76.20 3.76	76.20 3.25	76.20 4.88	10d
82.55 3.76	82.55 3.25	82.55 4.88	12d
88.90 4.11	88.90 3.43	88.90 5.26	16d
101.60 4.88	101.60 3.76	101.60 5.72	20d
114.30 5.26	114.30 3.76	114.30 6.20	30d
127.00 5.72	127.00 4.11	127.00 6.68	40d
_____	_____	139.70 7.19	50d
_____	_____	152.40 7.19	60d

CONVERSION TABLE FOR IRRIGATION COMPONENTS

METRIC WATER METERS, TRUCK LOADING STANDPIPES, VALVES, BACKFLOW PREVENTERS, FLOW SENSORS, WYE STRAINERS, FILTER ASSEMBLY UNITS, PIPE SUPPLY LINES, AND PIPE IRRIGATION SUPPLY LINES SHOWN ON THE PLANS DIAMETER NOMINAL (DN) mm	EQUIVALENT NOMINAL US SIZE inch
15	1/2
20	3/4
25	1
32	1-1/4
40	1-1/2
50	2
65	2-1/2
75	3
100	4
150	6
200	8
250	10
300	12
350	14
400	16

8-1.02 STATE-FURNISHED MATERIALS

Attention is directed to Section 6-1.02, "State-Furnished Materials," of the Standard Specifications and these special provisions. Paragraphs 2 through 6 of Section 6-1.02 shall not apply.

The following materials will be furnished to the Contractor:

A. 2.438 m diameter steel pipe piles (in 12 sections, with lengths and thickness as shown on the plans).
B. Steel cover plates (3 total, with diameter and thickness as shown on the plans).
C. 2.438 m diameter steel pipe for welding qualification (in 2 section, each 6.0 m long, wall thickness is 70 mm.)

The steel pipe piles, steel cover plates, and steel pipe for welding qualification have been fabricated and will be delivered by the State's Pile Fabricator: Eaton Metal Co., 4800 York St., Denver, CO 80216, (303) 296-4800, hereinafter called the Fabricator. The Contractor shall receive the state-furnished steel pipe piles, cover plates, and steel pipe for welding qualification at the Fabricator's delivery site, Pier 96, San Francisco, CA., and receipt shall commence on the morning of August 14, 2000.

The receipt activities and requirements include the following:

1. The Fabricator will provide mooring space for the Contractor's barge(s) at Pier 96 from August 14, 2000 through August 18, 2000. The Fabricator will provide cranes for loading steel pipe piling sections, cover plates and steel pipe for welding qualification onto the Contractor's barge(s). The Fabricator's available mooring space, crane loading and crane reach diagrams are included as "Information Handout," available to the Contractor as provided for in Section 2-1.03, "Examination of Plans, Specifications, Contract, and Site of Work," of the Standard Specifications.
2. The Fabricator will load the pipe piling sections, cover plates and steel pipe for welding qualification onto the Contractor's barge(s). The Fabricator will provide four consecutive 8-hour days for the loading of material onto the Contractor’s barge(s).

3. The Contractor shall supply and position all necessary supports, cradles, braces, straps, and tie-downs required to support and secure the materials on the Contractor's barge(s). Prior to August 14, 2000, the Contractor shall coordinate with the Fabricator regarding barge positioning, and picking and placing the material. The Contractor's forces shall be responsible for the completion and fastening of cradles, braces, straps, or tie-downs required to secure the material after placement.
4. After given material is loaded onto the Contractor's barge(s), the Contractor shall be responsible for the security of the material loaded on the barge(s) and for the prevention of subsequent damage and repair thereof to that material, unless, as determined by the Engineer, it can be shown that subsequent damage occurred which was solely due to the Fabricator's actions.
5. The Contractor shall provide access for the Engineer and also the Fabricator's forces during the loading and positioning of materials onto the Contractor's barge(s).
6. After completion of loading material onto the Contractor's barge(s), the Engineer will conduct an inspection of each steel pipe pile section and cover plate for damage caused during loading. The Engineer shall be allowed one 24-hour period for this inspection and approval/disapproval process. If materials are damaged by the Fabricator during loading, as determined by the Engineer, the Fabricator will immediately perform repairs and will notify the Engineer when materials are ready for re-inspection. The Engineer will be allowed one 24-hour period for this re-inspection and approval process.

The Contractor may be present during and may participate in the Engineer's inspection(s). If the Contractor's representative does not identify and bring to the attention of the Engineer, in writing, and within the 24-hour duration of the inspection period(s), of any nonconformance in pile fabrication tolerance (per "Piling," of these special provisions) noted during the inspection and any disagreement with the Engineer's findings during the inspection(s), the Contractor shall accept the findings of the Engineer and shall accept the condition of the materials as-is.

After the Engineer has inspected and approved the material and the Contractor has not disputed the Engineer's approval, in writing, the material receipt shall be considered to be concluded and Contractor shall be considered to have taken receipt of all of the State-furnished steel pipe piling, cover plates and steel pipe for welding qualification.

If Contractor is unable to take receipt of all of the State-furnished steel pipe piling, cover plates and steel pipe for welding qualification by August 18, 2000, through no fault of the Contractor (as determined by the Engineer), the delay will be considered a right of way delay in conformance with the provisions in Section 8-1.09, "Right of Way Delays," of the Standard Specifications. If the loading of the material to the Contractor's barge is delayed or is not completed within the allotted four consecutive 8-hour days, through no fault of the Fabricator or the State, as determined by the Engineer, the Contractor shall be liable for direct manpower and equipment costs incurred by the Fabricator. Subject delay(s) shall result in liquidated damages of $560.00 per calendar day and $560.00 per partial calendar day. Deductions will be made from any moneys due or that may become due the Contractor.

If the mooring and crane that is provided by the Fabricator, as described in the Information Handout, is not adequate for the Contractor, the Contractor shall provide additional mooring space and cranes.

If the mooring period of August 14, 2000 through August 18, 2000 is not adequate for the Contractor, the Contractor shall obtain an extended mooring period.

No additional compensation will be allowed for cranes and other equipment not furnished by the Fabricator as described in the Information Handout. No additional compensation will be allowed for additional mooring space or equipment not furnished by the Fabricator as described in the Information Handout. No compensation will be made for a mooring time prior to or after August 14, 2000 through August 18, 2000.

SECTION 8-2. (BLANK)

SECTION 8-3. WELDING

8-3.01 WELDING ELECTRODES

Flux core welding electrodes conforming to the requirements of AWS A5.20 E6XT-4 or E7XT-4 shall not be used to perform any type of welding for this project.

8-3.02 WELDING QUALITY CONTROL

Welding quality control shall conform to the requirements in the AWS welding codes, the Standard Specifications, and these special provisions.

Attention is directed to "Piling," of these special provisions. Welding quality control shall apply when any work is welded in conformance with said section of these special provisions. Requirements for full-scale weld joint qualification are found in "Piling," of these special provisions.

Wherever reference is made to the following AWS welding codes in the Standard Specifications, on the plans or in these special provisions, the year of adoption for these codes shall be as listed:

AWS Code	Year of Adoption
D1.1	1998
D1.4	1998
D1.5	1995
D1.5 (metric only)	1996

All requirements of the AWS welding codes shall apply unless specified otherwise in the Standard Specifications, on the plans or in these special provisions. Wherever the abbreviation AWS is used, it shall be equivalent to the abbreviations ANSI/AWS or ANSI/AASHTO/AWS.

The Contractor shall designate in writing a welding Quality Control Manager (QCM). The QCM shall be responsible directly to the Contractor for the quality of welding, including materials and workmanship, performed by the Contractor and all subcontractors.

The QCM shall be the sole individual responsible to the Contractor for submitting, receiving, and approving all correspondence, required submittals, and reports to and from the Engineer.

The QCM shall not be employed or compensated by any subcontractor, or by other persons or entities hired by subcontractors, who will provide other services or materials for the project. The QCM may be an employee of the Contractor. The QCM shall be a Certified Welding Inspector (CWI).

Welding inspection personnel or nondestructive testing (NDT) firms to be used in the work shall not be employed or compensated by any subcontractor, or by other persons or entities hired by subcontractors, who will provide other services or materials for the project, except for the following conditions:

A. The welding is performed at a permanent fabrication facility which is certified under the AISC Quality Certification Program, Category Cbr, Major Steel Bridges.

For welding performed at such certified facilities, the inspection personnel or NDT firms may be employed or compensated by the fabrication facility performing the welding.

One week after award and prior to submitting the Welding Quality Control Plan (WQCP) required herein, a pre-welding meeting between the Engineer, Contractor and any welding subcontractors or entities hired by these subcontractors to be used in the work, shall be held to discuss the requirements for the WQCP. This meeting will be held in the San Francisco Bay Area, at a location approved by the Engineer.

The NDT firm, including the material testing labs, to be used shall be located in California.

Four weeks after award and prior to performing any welding, the Contractor shall submit to the Engineer, in conformance with the provisions in Section 5-1.02, "Plans and Working Drawings," of the Standard Specifications, 3 copies of a separate WQCP for each item of work for which welding is to be performed. The WQCP shall be reviewed and signed by the QCM prior to submittal to the Engineer. As a minimum, each WQCP shall include the following:

A. The name of the welding firm and the NDT firm to be used;
B. A manual prepared by the NDT firm that shall include equipment, testing procedures, code of safe practices, the Written Practice of the NDT firm, and the names, qualifications and documentation of certifications for all personnel to be used;
C. The name of the QCM and the names, qualifications and documentation of certifications for all Quality Control (QC) Inspectors and Assistant Quality Control Inspectors to be used;
D. An organizational chart showing all QC personnel and their assigned QC responsibilities;
E. The methods and frequencies for performing all required quality control procedures, including QC inspection forms to be used, as required by the specifications including:

    1. All visual inspections;
    2. All NDT including radiographic geometry, penetrameter and shim selection, film quality, film processing, radiograph identification and marking system, and film interpretation and reports; and
    3. Calibration procedures and calibration frequency for all NDT equipment;

F. A system for the identification and tracking of all welds, NDT and any required repairs, and a procedure for the reinspection of any repaired welds. The system shall have provisions for 1) permanently identifying each weld and the person who performed the weld, 2) placing all required identification and tracking information on each radiograph, 3) a method of reporting nonconforming welds to the Engineer; 4) film shall be identified by lead numbers only; etching, flashing, or writing in identifications of any type will not be permitted, 5) each piece of film identification information shall be legible and shall include, as a minimum, the following information: Contractor's

name, date, name of nondestructive testing firm, initials of radiographer, contract number, part number, and weld number, and 6) the letter "R" and repair number shall be placed directly after the weld number to designate a radiograph of a repaired weld;

G. Standard procedures for performing noncritical repair welds. Noncritical repair welds are defined as welds to deposit additional weld beads or layers to compensate for insufficient weld size and to fill limited excavations that were performed to remove unacceptable edge or surface discontinuities, overlap or undercut. The depth of these excavations shall not exceed 65 percent of the specified weld size;

H. The welding procedure specification (WPS), including documentation of all supporting Procedure Qualification Record (PQR) tests performed, and the name of the testing laboratory who performed the tests, to verify the acceptability of the WPS. Prequalified welding procedures shall not be used. All WPS's shall be prepared and signed by a CWI and then submitted directly to the QCM for review and signature prior to submittal to the Engineer. The submitted WPS shall be within the allowable period of effectiveness;

I. Documentation of all certifications for welders for each weld process and position that will be used. Certifications shall list the electrodes used, test position, base metal and thickness, tests performed, and the witnessing authority. All certifications shall be within the allowable period of effectiveness; or provide evidence that the welder(s) have not exceeded the 6 month requirement per AWS; and

J. One copy each of all AWS welding codes which are applicable to the welding to be performed. These codes shall become the permanent property of the Department.

K. Example forms to be used for Certificates of Compliance, daily production logs, and inspection log of welds for use by QC inspector, action plan for reporting non-conforming welds, and daily reports.

The Engineer shall have 10 working days to review the WQCP submittal after a complete plan has been received. If a returned and corrected WQCP is resubmitted for review by the Engineer, the Engineer shall have an additional 10 working days to review the WQCP submittal. No welding shall be performed until the WQCP is approved in writing by the Engineer. Should the Engineer fail to complete the review within this time allowance and if, in the opinion of the Engineer, the Contractor's controlling operation is delayed or interfered with by reason of the delay in reviewing the WQCP, the delay will be considered a right of way delay in conformance with the provisions in Section 8-1.09, "Right of Way Delays," of the Standard Specifications.

An amended WQCP or addendum shall be submitted to, and approved in writing by the Engineer, for any proposed revisions to the approved WQCP. The amended WQCP shall be reviewed and signed by the QCM prior to submittal to the Engineer. An amended WQCP or addendum will be required for any revisions to the WQCP, including but not limited to a revised WPS, additional welders, changes in NDT firms or procedures, QC or NDT personnel, or updated systems for tracking and identifying welds. The Engineer shall have 3 working days to complete the review of the amended WQCP or addendum. Work that is affected by any of the proposed revisions shall not be performed until the amended WQCP or addendum has been approved. Should the Engineer fail to complete the review within this time allowance and if, in the opinion of the Engineer, the Contractor's controlling operation is delayed or interfered with by reason of the delay in reviewing the amended WQCP or addendum, the delay will be considered a right of way delay in conformance with the provisions in Section 8-1.09, "Right of Way Delays," of the Standard Specifications.

After final approval of the WQCP, amended WQCP, or addendum, the Contractor shall submit 7 copies to the Engineer of each of these approved documents.

It is expressly understood that the Engineer's approval of the Contractor's WQCP shall not relieve the Contractor of any responsibility under the contract for the successful completion of the work in conformity with the requirements of the plans and specifications. The Engineer's approval shall not constitute a waiver of any of the requirements of the plans and specifications nor relieve the Contractor of any obligation thereunder, and defective work, materials and equipment may be rejected notwithstanding approval of the WQCP.

A daily production log for welding shall be kept by the QCM for each day that welding is performed. The log shall clearly indicate the locations of all welding, and shall include the welders' names, amount of welding performed, any problems or deficiencies discovered, and any testing or repair work performed, at each location. The daily report from each Quality Control Inspector shall also be included in or with the log.

The following items shall be included in a Welding Report that is to be submitted to the Engineer within 24 hours following the completion of any welding inspection:

A. Reports of all visual weld inspections and NDT;

B. Radiographs and radiographic reports, and other required NDT reports;

C. Documentation that the Contractor has evaluated all radiographs and other nondestructive tests, corrected all rejectable deficiencies, and all repaired welds have been reexamined by the required NDT and found acceptable; and

D. Daily production log.

All radiographic envelopes shall have clearly written on the outside of the envelope the following information: name of the QCM, name of the nondestructive testing firm, name of the radiographer, date, contract number, complete part description, and all included weld numbers or a report number, as detailed in the WQCP. In addition, all innerleaves shall have clearly written on them the part description and all included weld numbers, as detailed in the WQCP.

All reports regarding NDT, including radiographs, shall be signed by both the NDT technician and the person that performed the review, and then submitted directly to the QCM for review and signature prior to submittal to the Engineer. Corresponding names shall be clearly printed or typewritten next to all signatures.

The Engineer will review the Welding Report to determine if the Contractor is in conformance with the WQCP. The Engineer shall be allowed 24 hours to review the report and respond in writing after a complete Welding Report has been received. Prior to receiving notification from the Engineer of the Contractor's conformance with the WQCP, the Contractor may drive piling for which a Welding Report has been submitted. However, should the Contractor elect to drive piling prior to receiving notification from the Engineer, it is expressly understood that the Contractor shall not be relieved of the responsibility for incorporating material in the work that conforms to the requirements of the plans and specifications. Any material not conforming to these requirements will be subject to rejection. Should the Contractor elect to wait to drive piling notification by the Engineer, and should the Engineer fail to complete the review and provide notification within this time allowance, and if, in the opinion of the Engineer, the Contractor's controlling operation is delayed or interfered with by reason of the delay in notification, the delay will be considered a right of way delay in conformance with the provisions in Section 8-1.09, "Right of Way Delays," of the Standard Specifications.

Sections 6.1.2 through 6.1.4.3 of AWS D 1.1, Sections 7.1.1 and 7.1.2 of AWS D 1.4, and Sections 6.1.1.1 through 6.1.3.3 of AWS D 1.5 are replaced with the following:

Quality Control (QC) shall be the responsibility of the Contractor. As a minimum, the Contractor shall perform inspection and testing prior to welding, during welding and after welding as specified in this section and additionally as necessary to ensure that materials and workmanship conform to the requirements of the contract documents.

The Quality Control (QC) Inspector shall be the duly designated person who performs inspection, testing, and quality matters for all welding.

Quality Assurance (QA) is the prerogative of the Engineer and is independent of QC. The QA Inspector is the duly designated person who acts for and on behalf of the Engineer.

All QC Inspectors shall be responsible for quality control acceptance or rejection of materials and workmanship, and shall be currently certified as AWS Certified Welding Inspectors (CWI) in conformance with the requirements in AWS QC1, "Standard and Guide for Qualification of Welding Inspectors."

The QC Inspector may be assisted by an Assistant QC Inspector provided that this individual is currently certified as an AWS Certified Associate Welding Inspector (CAWI) in conformance with the requirements in AWS QC1, "Standard and Guide for Qualification of Welding Inspectors," or has equivalent qualifications as determined by the Engineer. The QC Inspector shall monitor the Assistant QC Inspector's work, and shall be responsible for signing all reports.

When the term "Inspector" is used without further qualification, it shall refer to the QC Inspector.

Section 6.14.6, "Personnel Qualification," of AWS D 1.1, Section 7.7.6, "Personnel Qualification," of AWS D 1.4, and Section 6.1.3.4, "Personnel Qualification," of AWS D 1.5 are replaced with the following:

Personnel performing NDT shall be qualified and certified in accordance with the requirements in the current edition of the American Society for Nondestructive Testing (ASNT) Recommended Practice No. SNT-TC-1A and the Written Practice of the NDT firm. In addition, a Level III must be certified as a Level II when performing NDT. The Written Practice of the NDT firm shall meet or exceed the requirements of the current edition of the ASNT Recommended Practice No. SNT-TC-1A. Only individuals who are 1) qualified for NDT Level II, or 2) Level III technicians who have been directly certified by the ASNT and are authorized to perform the work of Level II technicians, shall perform NDT, review the results, and prepare the written reports.

Prior to performing ultrasonic type NDT, personnel performing ultrasonic NDT will be required to verify their qualifications by both written and practical examinations. Information regarding these examinations included as "Information Handout," available to the Contractor as provided for in Section 2-1.03, "Examination of Plans, Specifications, Contract, and Site of Work," of the Standard Specifications.

Section 6.5.4, "Scope of Examination," of AWS D 1.1 and Section 7.5.4 of AWS D 1.4 are replaced with the following:

The QC Inspector shall inspect and approve the joint preparation, assembly practice, welding techniques, and performance of each welder, welding operator, and tack welder to make certain that the applicable requirements of this code and the approved WPS are met.

Section 6.5.4 of AWS D 1.5 is replaced with the following:

The QC Inspector shall inspect and approve the joint preparation, assembly practice, welding techniques, and performance of each welder, welding operator, and tack welder to make certain that the applicable requirements of this code and the approved WPS are met. The QC Inspector shall examine the work to make certain that it meets the requirements of section 3 and 9.21. The size and contour of welds shall be measured using suitable gages. Visual inspection for cracks in welds and base metal, and for other discontinuities should be aided by strong light magnifiers, or such other devices as may be helpful. Acceptance criteria different from those specified in this code may be used when approved by the Engineer.

The Engineer shall have the authority to verify the qualifications or certifications of any welder, Quality Control Inspector, or NDT personnel to specified levels by retests or other means.

A sufficient number of QC Inspectors shall be provided to ensure continuous inspection when any welding is being performed. Continuous inspection, as a minimum, shall include (1) having QC Inspectors continually present on all shifts when any welding is being performed, or (2) having a QC Inspector within such close proximity of all welding operations that inspections by the QC Inspector of each operation, at each welding location, shall not lapse for a period exceeding 30 minutes.

Inspection and approval of the joint preparation, assembly practice, welding techniques, and performance of each welder, welding operator, and tack welder shall be documented by the QC Inspector on a daily basis for each day that welding is performed.

The QC Inspector shall provide reports to the QCM on a daily basis for each day that welding is performed.

Except for noncritical weld repairs, base metal repairs, or any other type of repairs submitted in the WQCP, the Engineer shall be notified immediately in writing when any welding problems or deficiencies are discovered and also of the proposed repair procedures to correct them. The Engineer shall have 4 hours to review these procedures. No remedial work shall begin until the repair procedures are approved in writing by the Engineer. Should the Engineer fail to complete the review within this time allowance and if, in the opinion of the Engineer, the Contractor's controlling operation is delayed or interfered with by reason of the delay in reviewing the proposed repair procedures, the delay will be considered a right of way delay in conformance with the provisions in Section 8-1.09, "Right of Way Delays," of the Standard Specifications.

When joint details that are not prequalified by the applicable AWS codes are proposed for use in the work, all welders using these details shall perform a qualification test plate using the approved WPS variables and the joint detail to be used in production. The test plate shall be the maximum thickness to be used in production. The test plate shall be mechanically or radiographically tested as directed by the Engineer. Mechanical and radiographic testing and acceptance criteria shall be as specified in the applicable AWS codes.

The period of effectiveness for a welder's or welding operator's qualification shall be a maximum of 3 years for the same weld process, and welding position. A valid qualification at the beginning of work on a contract will be acceptable for the entire period of the contract, as long as the welder's work remains satisfactory.

All qualification tests for welders, welding operators, and WPSs used in welding operations shall be witnessed by the Engineer.

Section 6.6.5, "Nonspecified Nondestructive Testing Other Than Visual," of AWS D 1.1, Section 6.6.5 of AWS D 1.4 and Section 6.6.5 of AWS D 1.5 shall not apply.

For any welding, the Engineer may direct the Contractor to perform NDT that is in addition to the visual inspection or NDT specified in the AWS welding codes, in the Standard Specifications or in these special provisions. Additional NDT required by the Engineer, will be paid for as extra work as provided in Section 4-1.03D of the Standard Specifications. Should any welding deficiencies be discovered by this additional NDT, the cost of the testing will not be paid for as extra work and shall be at the Contractor's expense.

All required repair work to correct welding deficiencies, whether discovered by the required visual inspection or NDT, or by additional NDT directed by the Engineer, and any associated delays or expenses caused to the Contractor by performing these repairs, shall be at the Contractor's expense.

At the completion of all welding, the QCM shall sign and furnish to the Engineer, a Certificate of Compliance in conformance with the provisions in Section 6-1.07, "Certificates of Compliance," of the Standard Specifications for each item of work for which welding was performed. The certificate shall state that all of the materials and workmanship incorporated in the work, and all required tests and inspections of this work, have been performed in conformance with the details shown on the plans and the provisions of the Standard Specifications and these special provisions.

Full compensation for conforming to of the requirements of this section shall be considered as included in the contract prices paid for the various items of work involved and no additional compensation will be allowed therefor.

SECTION 9. DESCRIPTION OF BRIDGE WORK

The work in general, consists of mobilizing required equipment, taking receipt of State-furnished piling materials, field fit-up and weld splicing of pile sections, and installing three 2.438 m diameter steel pipe piles in the San Francisco Bay adjacent to the existing East spans of the San Francisco-Oakland Bay Bridge (Br. No. 33-25).

SECTION 10. CONSTRUCTION DETAILS

SECTION 10-1. GENERAL

10-1.01 ORDER OF WORK

Order of work shall conform to the provisions in Section 5-1.05, "Order of Work," of the Standard Specifications and these special provisions.

Pile Installation Sequence and Schedule Monitoring - The Pile Driving Phase of this contract shall begin the same day as Item Number 1 (as described in the following) commences. The Pile Driving Phase of this contract shall end the same day as Item Number 19 (as described in the following) is complete. The pile installation sequence during the Pile Driving Phase of this contract, and the schedule monitoring of said driving shall include the following:

1. Pile section 1A shall be driven to depth specified by the Engineer using Hammer A.
2. Pile section 1B shall be welded/spliced to section 1A and driven to depth specified by the Engineer using Hammer A.
3. Pile section 1C shall be welded/spliced to section 1B.
4. The Contractor shall move to test pile 2; pile section 2A shall be driven to depth specified by the Engineer using Hammer A.
5. Pile section 2B shall be welded/spliced to section 2A and driven to depth specified by the Engineer using Hammer A.
6. Pile section 2C shall be welded/spliced to section 2B.
7. The Contractor shall move to test pile 1; pile section 1C shall be driven to depth specified by the Engineer using Hammer B. The elapsed time between the completion of driving of section 1B and the driving of pile section 1C shall not be less than 72 hours nor more than 144 hours.
8. Pile section 1D shall be welded/spliced to section 1C and the pile shall be driven to within 600 mm of the final specified tip elevation using Hammer B. The elapsed time between the completion of driving of section 1C and the driving of pile section 1D shall not exceed 48 hours.
9. The Contractor shall move to test pile 2; pile section 2C shall be driven to depth specified by the Engineer using Hammer B. The elapsed time between the completion of driving of section 2B and the driving of pile section 2C shall not be less than 72 hours nor more than 144 hours.
10. Pile section 2D shall be welded/spliced to section 2C and the pile shall be driven to within 600 mm of the final specified tip elevation using Hammer B. The elapsed time between the completion of driving of section 2C and the driving of pile section 2D shall not exceed 48 hours.
11. The Contractor shall move to test pile 1 and the installed pile shall be re-driven at the direction of the Engineer using Hammer B. The elapsed time between completion of initial driving of pile section 1D and the re-driving of section 1D shall not be less than 24 hours.
12. On completion of re-driving of test pile 1, the Contractor shall move to test pile 2 and the installed pile shall be re-driven at the direction of the Engineer using Hammer B. The elapsed time between completion of initial driving of pile section 2D and the re-driving of section 2D shall be not less than 12 hours.
13. The Contractor shall move to test pile 3; pile section 3A shall be driven to depth specified by the Engineer using Hammer A.
14. Pile section 3B shall be welded/spliced to section 3A and driven to depth specified by the Engineer using Hammer A.
15. Pile section 3C shall be welded/spliced to section 3B and driven to depth specified by the Engineer using Hammer B. The elapsed time between the completion of driving of section 3B and driving of 3C shall not be less than 24 hours nor more than 72 hours.
16. Pile section 3D shall be welded/spliced to section 3C and the pile driven to within 300 mm of the specified tip elevation using Hammer B. The elapsed time between the completion of driving of section 3C and the driving of pile section 3D shall not exceed 48 hours.
17. The Contractor shall then move to test pile 1 and shall re-drive the pile to the specified tip elevation using Hammer B. The elapsed time between the end of the previous re-driving of test pile 1 and the re-driving to tip elevation shall not be less than 120 hours. The elapsed time between the completion of the initial driving of section 1D and the re-driving to tip elevation of section 1D shall not exceed 240 hours.

18. The Contractor shall then move to test pile 2 and shall re-drive the pile to the specified tip elevation using Hammer B. The elapsed time between the end of the previous re-driving of test pile 2 and the re-driving to tip elevation shall not be less than 120 hours. The elapsed time between the completion of the initial driving of section 2D and the re-driving to tip elevation of section 2D shall not exceed 240 hours.
19. The Contractor shall then move to test pile 3 and shall re-drive the pile to the specified tip elevation using Hammer B. The elapsed time between the end of the previous driving of test pile 3 and the re-driving to tip elevation shall not be less than 48 hours nor more than 240 hours.

The Contractor shall drive pilling at one location at a time; concurrent driving operations shall not be used. Pile driving the first section of piling shall be performed during daylight hours. When dynamic monitoring is specified in "Piling," elsewhere in these special provisions, the driving and associated dynamic monitoring shall be performed during daylight hours. All re-driving shall be performed during daylight hours.

If changes are ordered by the Engineer to the scope or sequence of pile driving, (as described in items 1 through 19) the Engineer may do the following:

a) extend contract time granted by the State in conformance with the provisions of the fifth paragraph of Section 8-1.07, “Liquidated Damages, “ of the Standard Specifications; or
b) reduce contract time set forth in approved contract change orders, in conformance with Section 4-1.03, “Changes,” of the Standard Specifications.

For purposes of evaluating the affect of ordered scope and sequence changes to the schedule, the Contractor shall submit to the Engineer for the Engineer’s approval, a detailed as-planned schedule for execution of Items 1 through 19. During the pile driving phase of the contract, the Contractor shall maintain an as-built schedule, including daily field reports and documentation of ordered scope and sequence changes. During the pile driving phase of the contract, the Contractor shall meet daily with the Engineer to compare the as-planned schedule with the as-built schedule. At the end of the pile driving phase, the Contractor shall submit to the Engineer the final as-built schedule.

The above pile installation sequence and schedule monitoring shall be in addition to scheduling requirements specified elsewhere in "Progress Schedule (Critical Path)", of these special provisions.

On completion of the driving to specified tip elevation the Contractor shall install protective cover and navigation lighting on top of each pile.

Full compensation for conformance with the pile installation sequence and schedule monitoring shall be considered as included in the contract lump sum price paid for progress schedule (critical path) and no additional compensation will be allowed therefor.

The elapsed times specified between driving and re-driving and subsequent re-driving to final tip elevation shall not be considered as delays to the Contractor’s operations and no additional compensation will be allowed therefor.

Two possible installation locations are shown on the Plans for Pile No. 3. If directed by the Engineer, the Contractor shall install Pile No. 3 at the alternate location and no delays or additional compensation will be allowed therefor.

10-1.02 PROGRESS SCHEDULE (CRITICAL PATH)

Progress schedules will be required for this contract. Progress schedules shall utilize the Critical Path Method (CPM).

Definitions - The following definitions apply to this section "Progress Schedule (Critical Path)":

1) Activity: Any task, or portion of a project, which takes time to complete.
2) Baseline Schedule: The initial CPM schedule representing the Contractor's original work plan, as accepted by the Engineer.
3) Controlling Operation: The activity considered at the time by the Engineer, within that series of activities defined as the critical path, which if delayed or prolonged, will delay the time of completion of the contract.
4) Critical Path: The series of activities, which determines the earliest completion of the contract (Forecast Completion Date).
5) Critical Path Method: A mathematical calculation to determine the earliest completion of the contract represented by a graphic representation of the sequence of activities that shows the interrelationships and interdependencies of the elements composing a project.
6) Current Contract Completion Date: The extended date for completion of the contract shown on the weekly statement of working days furnished by the Engineer in accordance with Section 8-1.06, "Time of Completion," of the Standard Specifications.

7) Early Completion Time: The difference in time between the current contract completion date and the Contractor's scheduled early forecast completion date as shown on the accepted baseline schedule, or schedule updates and revisions.
8) Float: The amount of time between the early start date and the late start date, or the early finish date and the late finish date, of any activity or group of activities in the network.
9) Forecast Completion Date: The completion date of the last scheduled work activity identified on the critical path.
10) Fragnet: A section or fragment of the network diagram comprised of a group of activities.
11) Free Float: The amount of time an activity can be delayed before affecting a subsequent activity.
12) Hammock Activity: An activity added to the network to span an existing group of activities for summarizing purposes.
13) Milestone: A marker in a network, which is typically used to mark a point in time or denote the beginning or end of a sequence of activities. A milestone has zero duration, but will otherwise function in the network as if it were an activity.
14) Revision: A change in the future portion of the schedule that modifies logic, adds or deletes activities, or alters activities, sequences, or durations.
15) Tabular Listing: A report showing schedule activities, their relationships, durations, scheduled and actual dates, and float.
16) Total Float: The amount of time that an activity may be delayed without affecting the total project duration of the critical path.
17) Update: The modification of the CPM progress schedule through a regular review to incorporate actual progress to date by activity, approved time adjustments, and projected completion dates.
18) Time Scaled Logic Diagram: A schematic display of the logical relationships of project activities, drawn from left to right to reflect project chronology with the positioning and length of the activity representing its duration.
19) Bar Chart (Gantt Chart): A graphic display of scheduled-related information, activities or other project elements are listed down the left side of the chart, date are shown across the top, and activity durations are shown as date-placed horizontal bars.

Pre-construction Scheduling Conference - The Engineer shall schedule and conduct a Preconstruction Scheduling Conference with the Contractor's Project Manager and Construction Scheduler within seven days after the bidder has received the contract for execution. At this meeting, the requirements of this section of the special provisions will be reviewed with the Contractor. The Contractor shall be prepared to discuss its schedule methodology, proposed sequence of operations, the activity identification system for labeling all work activities, the schedule file numbering system, and any deviations it proposes to make from the Stage Construction Plans. The Engineer shall submit a diskette of a scheduling shell project, displaying an activity code dictionary consisting of fields populated with the Caltrans Scope Breakdown Structure Code. The Contractor shall utilize these codes, and may add other codes as necessary, to group and organize the work activities. Periodically the Engineer may request the Contractor to utilize additional filters, layouts or activity codes to be able to further group or summarize work activities.

Also, the Engineer and the Contractor shall review the requirements for all submittals applicable to the contract and discuss their respective preparation and review durations. All submittals and reviews are to be reflected on the Interim Baseline Schedule and the Baseline Schedule.

Interim Baseline Schedule - Within 15 days after approval of the contract, the Contractor shall submit to the Engineer an Interim Baseline Project Schedule which will serve as the progress schedule for the first 120 days of the project, or until the Baseline Schedule is accepted, whichever is sooner. The Interim Baseline Schedule shall utilize the critical path method. The Interim Baseline Schedule shall depict how the Contractor plans to perform the work for the first 120 days of the contract. Additionally, the Interim Baseline Schedule shall show all submittals required early in the project, and shall provide for all permits, and other non-work activities necessary to begin the work. The Interim Baseline Schedule submittal shall include a 3 l/2 inch floppy diskette which contains the data files used to generate the schedule.

The Engineer shall be allowed 10 days to review the schedule and to provide comments, including the Contractor’s application of the supplied scope breakdown structure. The Interim Baseline Schedule does not require Caltrans approval but all comments are to be implemented into the Baseline Schedule. Re-submittal of the Interim Baseline Schedule is not required. Late review of the Interim Baseline Schedule shall not restrain the submittal of the Baseline Schedule.

Baseline Schedule - Within 30 days, after approval of the contract, the Contractor shall submit to the Engineer a Baseline Project Schedule including the incorporation of all comments provided to the Interim Baseline Schedule. The Baseline Schedule shall have a data date of the day prior to the first working day of the contract. The schedule shall not include any actual start dates, actual finish dates, or constraint dates. The Baseline Progress Schedule shall meet interim milestone dates, contract milestone dates, stage construction requirements, internal time constraints, show logical sequence of activities, and must not extend beyond the number of days originally provided for in the contract.

All task activities shall be assigned to a project calendar. Each calendar shall identify a workweek, and holidays. Use different calendars for work activities that occur on different work schedules.

The Contractor shall not add job inefficiencies or weather days to a project calendar without prior approval by the Engineer.

The Baseline CPM Schedule submitted by the Contractor shall have a sufficient number of activities to assure adequate planning of the project and to permit monitoring and evaluation of progress and the analysis of time impacts. The Baseline Schedule shall depict how the Contractor plans to complete the whole work involved, and shall show all activities that defines the critical path. Each construction activity shall have durations of not more than 20 working days, and not less than one working day unless permitted otherwise by the Engineer. All activities in the schedule, with the exception of the first and last activities, shall have a minimum of one predecessor and a minimum of one successor.

The Baseline Schedule shall not attribute negative float to any activity. Float shall not be considered as time for the exclusive use of or benefit of either the State or the Contractor but shall be considered as a jointly owned, expiring resource available to the project and shall not be used to the financial detriment of either party. Any accepted schedule, revision or update having an early completion date shall show the time between the early completion date and the current Contract Completion Date as "total float".

The Contractor shall be responsible for assuring that all work sequences are logical and the network shows a coordinated plan for complete performance of the work. Failure of the Contractor to include any element of work required for the performance of the contract in the network shall not relieve the Contractor from completing all work within the time limit specified for completion of the contract. If the Contractor fails to define any element of work, activity or logic, the Contractor in the next monthly update or revision of the schedule shall correct it.

The Baseline Progress Schedule shall be supplemented with resource allocations for every task activity to a level of detail that facilitates report generation based on labor craft and equipment class for the Contractor and subcontractors. The Contractor shall use average composite crews to display the labor loading of on-site construction activities. The Contractor shall optimize and level labor to reflect a reasonable plan for accomplishing the work of the contract and to assure that resources are not duplicated in concurrent activities. Along with the baseline progress schedule, the Contractor shall also submit to the Engineer time-scaled resource histograms of the labor crafts and equipment classes to be utilized on the contract.

The Contractor shall not create hammock activities for the purpose of resources loading.

The Contractor shall require each subcontractor to submit in writing a statement certifying that the subcontractor has concurred with the Contractor's CPM, including major updates, and that the subcontractor's related schedule has been incorporated accurately, including the duration of activities, labor and equipment loading. Should the Baseline Schedule or schedule update, submitted for acceptance, show variances from the requirements of the contract, the Contractor shall make specific mention of the variations in the letter of transmittal, in order that, if accepted, proper adjustments to the project schedule can be made. The Contractor will not be relieved of the responsibility for executing the work in strict accordance with the requirements of the contract documents. In the event of a conflict between the requirements of the contract documents and the information provided or shown on an accepted schedule, the requirements of the contract documents shall take precedence.

Each schedule submitted to the Engineer shall comply with all limits imposed by the contract, with all specified intermediate milestone and contract completion dates, and with all constraints, restraints or sequences included in the contract. The degree of detail shall include factors including, but not limited to:

1) Physical breakdown of the project;
2) Contract milestones and completion dates, substantial completion dates, constraints, restraints, sequences of work shown in the contract, the planned substantial completion date, and the final completion date;
3) Type of work to be performed, the sequences, and the major subcontractors involved;
4) All purchases, submittals, submittal reviews, manufacture, fabrication, tests, delivery, and installation activities for all major materials and equipment.
5) Preparation, submittal and approval of shop and working drawings and material samples, showing time, as specified elsewhere, for the Engineer's review. The same time frame shall be allowed for at least one resubmittal on all major submittals so identified in the contract documents;
6) Identification of interfaces and dependencies with preceding, concurrent and follow-on contractors, railroads, and utilities as shown on the plans or specified in the specifications;
7) Identification of each and every utility relocation and interface as a separate activity, including activity description and responsibility coding that identifies the type of utility and the name of the utility company involved.
8) Actual tests, submission of test reports, and approval of test results;
9) All start-up, testing, training, and assistance required under the Contract;
10) Punch list and final clean-up;
11) Identification of any manpower, material, or equipment restrictions, as well as any activity requiring unusual shift work, such as double shifts, 6-day weeks, specified overtime, or work at times other than regular days or hours; and

12) Identification of each and every ramp closing and opening event as a separate one-day activity, including designation by activity coding and description that it is a north-bound, south-bound, east-bound, west-bound, and entry or exit ramp activity.

The Baseline Schedule submittal shall include a 3 l/2 inch floppy diskette which contains the data files used to generate the schedule, a schedule narrative describing the critical path, and all schedule reports.

The Engineer shall be allowed 15 days to review and accept or reject the baseline project schedule submitted. Rejected schedules shall be resubmitted to the Engineer within 5 days, at which time a new 15 day review period by the Engineer will begin.

Project Schedule Reports - Schedules submitted to the Engineer including Interim Baseline, Baseline, and update schedules shall include time scaled network diagrams in a layout format requested by the Engineer. The network diagrams submitted to the Engineer shall also be accompanied by four computer-generated mathematical analysis tabular reports for each activity included in the project schedule. The reports (8 1/2" x 11" size) shall include a network diagram report showing the activity columns only, a predecessor and successor report, a resource report (Interim Baseline and Baseline Schedules), and a scheduling and leveling calculation report. The network diagram reports shall include, at a minimum, the following for each activity:

1) Activity number and description;
2) Activity codes;
3) Original, actual and remaining durations;
6) Early start date (by calendar date);
7) Early finish date (by calendar date);
8) Actual start date (by calendar date);
9) Actual finish date (by calendar date);
10) Late start date (by calendar date);
11) Late finish date (by calendar date);
12) Identify activity calendar ID;
14) Total Float and Free Float, in work days and;
15) Percentage complete.

Network diagrams shall be sorted and grouped in a format requested by the Engineer reflecting the project breakdown per the Caltrans scope breakdown structure codes. They shall show a continuous flow of information from left to right per the project sorting and grouping codes. E.g., project milestones, submittals sub-grouped by description, and the construction activities sub-grouped by the scope breakdown structure. The primary paths of criticality shall be clearly and graphically identified on the networks. The network diagram shall be prepared on E-size sheets (36" x 48"), shall have a title block in the lower right-hand corner, and a timeline on each page. Exceptions to the size of the network sheets and the use of computer graphics to generate the networks shall be subject to the approval of the Engineer.

Schedule network diagrams the tabular reports shall be submitted to the Engineer for acceptance in the following quantities:

a) 2 sets of the Network Diagrams;
b) 2 copies of the tabular reports (8 1/2" x 11" size); and
c) 3 computer diskettes.

Weekly Schedule Meetings - The Engineer and the Contractor shall hold weekly scheduling meetings to discuss the near term schedule activities, to address any long-term schedule issues, and to discuss any relevant technical issues. The Contractor shall develop a rolling 4-week schedule identifying the previous week worked and a 3-week look ahead. It shall provide sufficient detail to address all activities to be performed and to identify issues requiring engineering action or input.

Monthly Update Schedules - The Contractor shall submit a Monthly Update Schedule to the Engineer once in each month within 5 days of the data date. The proposed update schedule prepared by the Contractor shall include all information available as of the 20th calendar day of the month, or other data date as established by the Engineer. A detailed list of all proposed schedule changes such as logic, duration, lead/lag, forecast completion date, additions and deletions shall be submitted with the update.

The monthly update of the schedule shall focus on the period from the last update to the current cut-off data date. Changes to activities or logic beyond the data date are classified as revisions and need to be addressed per the schedule revision section of this specification. Activities that have either started or finished shall be reported as they actually occurred and designated as complete, if actually completed. For activities in progress that are forecasted to complete longer than

planned, the remaining durations shall be revised, not the original durations. All out of sequence activities are to be reviewed and their relationships either verified or changed.

The Monthly Update Schedule submitted to the Engineer shall be accompanied by a Schedule Narrative Report. The report shall describe the physical progress during the report period, plans for continuing the work during the forthcoming report period, actions planned to correct any negative float, and an explanation of potential delays or problems and their estimated impact on performance, milestone completion dates, forecast completion date, and the overall project completion date. In addition, alternatives for possible schedule recovery to mitigate any potential delay or cost increases shall be included for consideration by the Engineer. The report shall follow the outline set forth below:

Contractor's Schedule Narrative Report Outline:

1) Contractor's Transmittal Letter
2) Work completed during the period
3) Description of the current critical path
4) Description of problem areas
5) Current and anticipated delays
   a) Cause of the delay
   b) Corrective action and schedule adjustments to correct the delay
   c) Impact of the delay on other activities, milestones, and completion dates
6) Changes in construction sequences
7) Pending items and status thereof
   a) Permits
   b) Change Orders
   c) Time Extensions
   d) Non-Compliance Notices
8) Contract completion date(s) status
   a) Ahead of schedule and number of days
   b) Behind schedule and number of days
9) Include updated Network Diagram and Reports

The Contractor shall provide to the Engineer a 3 1/2” electronic disk of the schedule, together with printed copies of the network diagrams and tabular reports described under "Project Schedule Reports", and the Schedule Narrative Report.

Portions of the network diagram on which all activities are complete need not be reprinted and submitted in subsequent updates. However, the electronic disk file of the submitted schedule and the related reports shall constitute a clear record of progress of the work from award of contract to final completion.

On a date determined by the Engineer, the Contractor shall meet with the Engineer to review the monthly schedule update. At the monthly progress meeting, the Contractor and the Engineer shall review the updated schedule and shall discuss the content of the Narrative Report. The Engineer shall be allowed 10 days after the meeting to review and accept or reject the update schedule submitted. Rejected schedules shall be resubmitted to the Engineer within 5 days, at which time a new 5 day review period by the Engineer will begin. All efforts shall be made between the Engineer and the Contractor to complete the review and the approval process prior to the next update schedule cutoff date. To expedite the process a second meeting between the Engineer and the Contractor shall be held.

Schedule Revisions - If the Contractor desires to make a change to the accepted schedule, the Contractor shall request permission from the Engineer in writing, stating the reasons for the change, and proposed revisions to activities, logic and duration. The Contractor shall submit for acceptance an analysis showing the effect of the revisions on the entire project. The analysis shall include:

1) An updated schedule not including the revisions. The schedule shall have a data date just prior to implementing the proposed revisions and include the project completion date;
2) A revised schedule that includes the proposed revisions. The schedule will have the same data date as the updated schedule and include a project completion date;
3) A narrative explanation of the revisions and their impact to the schedule; and
4) Computer files of the updated schedule and the revised schedule sequentially numbered or renamed for archive (record) purposes.

The Engineer will provide a response within 10 days. No revision to the accepted baseline schedule or the schedule updates shall be made without the prior written approval of the Engineer.

The Engineer will request the Contractor to submit a proposed revised schedule within 15 days when:

a) there is a significant change in the Contractor's operations that will affect the critical path;
b) the current updated schedule indicates that the contract progress is 30 days or more behind the planned schedule, as determined by the Engineer; or
c) the Engineer determines that an approved or anticipated change will impact the critical path, milestone or completion dates, contract progress, or work by other contractors.

The Engineer shall be allowed 10 days to review and accept or reject a schedule revision. Rejected schedule revisions shall be revised and resubmitted to the Engineer within 10 days, at which time a new 10 day review period by the Engineer will begin. Only upon approval of a change by the Engineer shall it be reflected in the next schedule update submitted by the Contractor.

Schedule Time Extension Requests - When the Contractor requests a time extension due to contract change orders or delays, the Contractor shall submit to the Engineer a written Time Impact Analysis illustrating the influence of each change or delay on the current contract completion date or milestone completion date, utilizing the current accepted schedule. Each Time Impact Analysis shall include a schedule revision demonstrating how the Contractor proposes to incorporate the Change Order or delay into the current schedule. The schedule shall include the sequence of activities and any revisions to the existing activities to demonstrate the influence of the delay, the proposed method for incorporating the delay, and its impact into the schedule.

Each Time Impact Analysis shall demonstrate the estimated time impact based on the events of delay, the anticipated or actual date of the contract change order work performance, the status of construction at that point in time, and the event time computation of all activities affected by the change or delay. The event times used in the analysis shall be those included in the latest update of the current schedule in effect at the time the change or delay was encountered.

Time extensions will be granted only to the extent that equitable time adjustments for the activity or activities affected exceed the total or remaining float along the critical path of activities at the time of actual delay, or at the time the contract change order work is performed. Float time is not for the exclusive use or benefit of the Engineer or the Contractor, but is an expiring resource available to all parties as needed to meet contract milestones and the contract completion date. Time extensions will not be granted nor will delay damages be paid unless:

a) The delay is beyond the control and without the fault or negligence of the Contractor and its subcontractors or suppliers, at any tier; and,
b) The delay extends the actual performance of the work beyond the applicable current contract completion date and the most recent date predicted for completion of the project on the accepted schedule update current as of the time of the delay or as of the time of issuance of the contract change order.

Time Impact Analyses shall be submitted in triplicate within 15 days after the delay occurs or after issuance of the contract change order. A schedule file diskette is also to be submitted.

Acceptance or rejection of each Time Impact Analysis by the Engineer will be made within 15 days after receipt of the Time Impact Analysis, unless subsequent meetings and negotiations delay the review. A copy of the Time Impact Analysis accepted by the Engineer shall be returned to the Contractor and the accepted schedule revisions illustrating the influence of the contract change orders or delays shall be incorporated into the project schedule during the first update after acceptance.

Final Schedule Update - Within 15 days after the acceptance of the contract by the Director, the Contractor shall submit a final update of the schedule with actual start and actual finish dates for all activities. This schedule submission shall be accompanied by a certification, signed by an officer of the company and the Contractor's Project Manager stating "To the best of my knowledge, the enclosed final update of the project schedule reflects the actual start and completion dates of the activities contained herein."

Equipment and Software - The Contractor shall provide for the State's exclusive possession and use a complete computer system specifically capable of creating, storing, updating and producing CPM schedules. Before delivery and setup of the computer system, the Contractor shall submit to the Engineer for approval a detailed list of all computer hardware and software the Contractor proposes to furnish. The minimum computer system to be furnished shall include the following:

1) Complete computer system, including keyboard, mouse, 20 inch color SVGA monitor (1,024x768 pixels), Intel Pentium 350 MHz micro processor chip, or equivalent, or better;
2) Computer operating system software, compatible with the selected processing unit, for Windows 95 or later, or equivalent;
3) Minimum sixty-four (64) megabytes of random access memory (RAM);

4) A 3.2 gigabyte minimum hard disk drive, a 1.44 megabyte 3 l/2 inch floppy disk drive, 32x speed minimum CD-ROM drive, Ethernet card and 56k modem;
5) A color-ink-jet plotter with a minimum 36Megabytes RAM, capable of 300 dots per inch color, 600 dots per inch monochrome, or equivalent. Capable of printing fully legible, time scaled charts, and network diagrams, in four colors, with a minimum size of 36 inches by 48 inches (E size) and is compatible with the selected system. Capable of plotting 3 E sized sheets within one hour. Plotter paper and ink cartridges throughout the contract.
6) CPM software shall be Primavera Project Planner, the latest version for Windows 95, or later;
7) Scheduler Analyzer Pro or equivalent – a suite of programs to assist in schedule analysis, the latest version for Windows 95, Windows NT or later and,
8) Microsoft Office software, the latest version for Windows 95, Windows NT or later, and McAfee Virus software or equivalent.

The computer hardware and software furnished shall be compatible with that used by the Contractor for the production of the CPM progress schedule required by the Contract, and shall include original instruction manuals and other documentation normally provided with the software.

The Contractor shall furnish, install, set up, maintain and repair the computer hardware and software ready for use at a location determined by the Engineer. The hardware and software shall be installed and ready for use by the first submission of the baseline schedule. The Contractor shall provide 24 hours of formal training for the Engineer, and three other agents of the department designated by the Engineer, in the use of the hardware and software to include schedule analysis, reporting, and resource and cost allocations. An authorized vendor of Project Primavera shall perform the training.

All computer hardware and software furnished shall remain the property of the Contractor and shall be removed by the Contractor upon acceptance of the contract when no claims involving contract progress are pending. When claims involving contract progress are pending, computer hardware or software shall not be removed until the final estimate has been submitted to the Contractor.

Payment - Progress schedule (critical path) will be paid for at a lump sum price. The contract lump sum price paid for progress schedule (critical path) shall include full compensation for furnishing all labor, materials (including computer hardware and software), tools, equipment, and incidentals; and for doing all the work involved in preparing, furnishing, updating and revising CPM progress schedules. Also for maintaining and repairing the computer hardware and training the Engineer in the use of the computer hardware and software as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

Payments for progress schedule (critical path) will be made as follows:

Interim baseline schedule accepted, then 10 percent payment for progress schedule (critical path) will be made.

Baseline schedule accepted, then 10 percent payment for progress schedule (critical path) will be made.

Monthly update schedules accepted, then 75 percent payment for progress schedule (critical path) will be made equally for each update.

Final schedule update accepted, then 5 percent payment for progress schedule (critical path) will be made.

The Department will retain an amount equal to 25 percent of the estimated value of the work performed during the first estimate period in which the Contractor fails to submit an interim baseline, baseline, revised or updated CPM schedule conforming to the requirements of this section, as determined by the Engineer. Thereafter, on subsequent successive estimate periods the percentage the Department will retain will be increased at the rate of 25 percent per estimate period in which acceptable CPM progress schedules have not been submitted to the Engineer. Retention's for failure to submit acceptable CPM progress schedules shall be additional to all other retention's provided for in the contract. The retention for failure to submit acceptable CPM progress schedules will be released for payment on the next monthly estimate for partial payment following the date that acceptable CPM progress schedules are submitted to the Engineer.

The adjustment provisions in Section 4-1.03, "Changes," of the Standard Specifications, shall not apply to the item of progress schedule (critical path). Adjustments in compensation for the project schedule will not be made for any increased or decreased work ordered by the Engineer in furnishing project schedules.

10-1.03 ESTABLISH MARINE ACCESS

This work shall consist of furnishing, erecting and removing barges, trestles and other facilities to provide marine access to the job site. This work shall be separate from and in addition to the work specified in Section 11, "Mobilization," of the Standard Specifications.

The Contractor shall submit, for approval by the Engineer, a schedule of values detailing the cost breakdown of the contract lump sum item for establish marine access. The schedule of values shall reflect the items, work, quantities and costs required to establish marine access to the job site, including as a minimum: initial mobilization of marine access facilities and

demobilization. The Contractor shall be responsible for the accuracy of the quantities and costs used in the schedule of values submitted for approval.

The sum of the amounts for the items and work listed in the schedule of values shall be equal to the contract lump sum price for establish marine access. Changes in the schedule of values, due to changes by the Contractor in the items and work listed, shall not result in a change in the contract lump sum price for establish marine access.

The schedule of values for establish marine access shall be submitted to the Engineer within the time required for submittal of the Interim Baseline Schedule, as specified in "Progress Schedule (Critical Path)" of these special provisions. The items and work listed in the schedule of values shall be designated in the resource loading required in the Baseline Schedule required in "Progress Schedule (Critical Path)" of these special provisions.

When approved in writing by the Engineer, the schedule of values will be used only to determine progress payments for establish marine access during the progress of the work. No partial payment for establish marine access will be made until the schedule of values is approved in writing by the Engineer.

The contract lump sum price paid for establish marine access shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in establishing marine access to the job site, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

When other contract items are adjusted as provided in Section 4-1.03, "Changes," of the Standard Specifications, the costs of establishing marine access to the job site will be deemed to have been recovered by the Contractor through the payments made for establish marine access, and will be excluded from consideration in determining compensation for the adjustments.

10-1.04 TRANSPORTATION FOR THE ENGINEER

The Contractor shall provide transportation for the Engineer in accordance with Section 5-1.08, "Inspection," of the Standard Specifications and these special provisions.

Attention is directed to section, "Order of Work," elsewhere in these special provisions.

The Contractor shall provide, operate, berth and maintain, throughout the pile driving phase of the contract, 1 commercial grade work boat for the sole use of the Engineer and the Engineer's staff in performance of their work. In addition, the Engineer and all authorized representatives of the State, acting within the scope of their duties in connection with the work under this contract, shall be permitted to ride as passengers, without charge, on any boat operated by, or for, the Contractor for the transportation of personnel, equipment or materials. It is agreed that such transportation will be only on the boat that is making trips in connection with the Contractor’s operation.

The commercial grade work boat shall be 40 foot launch adequate for open water operations, or equal, meeting or exceeding the following minimum requirements:

DRIVE POWER:

1) Engines – Twin diesel engines, 600 HP total, twin screw
2) Fuel Tank – 300 gal.tank

EQUIPMENT:

1) 50 lb. Anchor with chain and line (adequate for specific site condition)
2) Aluminum or steel hull construction
3) Tires or rubber fenders for tendering around the boat
4) Mooring bitts located forward and aft on boat

ELECTRONICS:

1) VHF/FM Radio System
2) One (1) Com 58 or equal
3) Radar System Furuno 731 or equal
4) Depth finder digital
5) Compass Richie navigator 2 each or equal
6) State compatible cellular/radio system, boat mounted with loud speaker

SAFETY & EMERGENCY EQUIPMENT:

1) United States Coast Guard required commercial grade safety and emergency equipment
2) Navigation lights, commercial U.S. Coast Guard approved
3) San Francisco Bay Navigation Charts appropriate for the project requirements
4) United States Coast Guard-approved life jackets for the Contractor's personnel.

United States Coast Guard-approved life jackets for the Contractor's personnel shall be provided and maintained on the boats at all times, as required by the United States Coast Guard. Life jackets for the Department's visitors and representatives will be provided by the Department at no cost to the Contractor.

The Contractor shall provide for the Department's visitors and representatives safe and protected permanent vertical access, as approved by the Engineer, to all marine construction equipment being utilized for construction of the project.

The Contractor shall provide safety training relative to marine transportation to the State's and the Contractor's personnel, prior to the commencement of work. Training shall include a review of the approved U.S. Coast Guard Safety Manual by all personnel prior to using the Contractor's provided marine transportation. The Contractor shall also conduct a quarterly Marine Safety Workshop for the Department's representatives.

The Contractor shall furnish a licensed boat operator and crew members, as required for the boat's operation and in accordance with all Maritime Agreements and Laws, including, but not limited to, the regulations contained in Title 46 Code of Federal Regulation Section 16 and Sections 24 through 26. The boat must have a valid U.S. Coast Guard Certificate of Inspection (COI), and must be manned and operated in accordance with the COI. The boat, boat operator and crew shall be furnished throughout the pile driving phase of the contract. Throughout the pile driving phase of the contract, the boat, boat operator and crew shall be furnished for the complete duration of the work shift, but no less than 8 hours each day on the days when the Contractor's work is in progress.

The Contractor shall provide insurance coverage under the Federal Longshoremen's and Harbor Workers Compensation Act, the Jones Act and the Marine Act with respect to work performed from, or by use of, vehicles on any navigable water of the United States, including liability insurance for watercraft operations. At the option of the Contractor, liability insurance for watercraft operations may be covered under a separate Protection and Indemnity policy, provided the policy contains a combined single limit of at least $50,000,000 per occurrence and $50,000,000 aggregate.

The Contractor shall provide berthing facilities at one of the possible locations listed below:

1. Port of Oakland
2. Port of San Francisco
3. Yerba Buena Island
4. Treasure Island

or at an alternate location approved by the Engineer. Contractor shall provide 10 full-size automobile parking spaces dedicated for use by State Personnel or guests within 1/2 km of the designated berthing facility.

The Contractor shall maintain the boats and equipment provided to the Engineer, including daily fueling, routine maintenance, equipment compliance, systems operations and the immediate repair of damage to the boats or their elements. All boats and equipment shall be kept in good and proper working condition.

The boats shall remain the property of the Contractor. The boats shall not be removed from the site of the work until after acceptance of the contract.

The contract lump sum price paid for transportation for the Engineer shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in providing transportation for the Engineer as specified herein.

Payment for furnishing a boat, boat operator and crew on the days that are not within the pile driving phase of the contract, as determined by the Engineer, will be paid for as extra work as provided in Section 4-1.03D of the Standard Specifications.

Throughout the pile driving phase of the contract, payment for furnishing a boat, boat operator and crew on the days when the Contractor's work is not in progress will be paid for as extra work as provided in Section 4-1.03 of the Standard Specifications. On the days when the Contractor's work is in progress and the complete duration of the work shift is a minimum of 8 hours, payment for furnishing a boat, boat operator and crew in excess of the complete duration of the work shift will be paid for as extra work as provided in Section 4-1.03D of the Standard Specifications. On the days when the Contractor's work is in progress and the complete duration of the work shift is less than 8 hours, payment for furnishing a boat, boat operator and crew in excess of 8 hours will be paid for as extra work in Section 4-1.03D of the Standard Specifications. No additional payment will be made for furnishing the boat, boat operator and crew in excess of the time specified herein.

10-1.05 ENGINEER'S FIELD OFFICE

The Contractor shall provide a field office for the sole use of the Engineer and his representatives having at least 200 square feet of floor space. The office shall be located on a barge located at the pile installation site. It shall have windows, doors with locks, a desk (30 inches by 60 inches), and executive chair, 3 office chairs, a 3' x 6' drafting table, drafting stool, drafting table lamp, 4-foot bookshelf, pencil sharpener, heating, air-conditioning, electric lighting, use of copying machine, and bottled water service. If the Engineer's office is to be located in the same building as the Contractor's Superintendent's office, it shall be partitioned off and provided with a separate entrance.

Equipment to be furnished shall be of standard quality and new, or like new in appearance and function.

The Contractor shall provide, maintain, and subsequently remove as his property, the field office as specified herein, for the free and exclusive use of the Engineer and his representatives.

The Engineer's field office, equipped as specified, shall be available at the site for the Engineer's use prior to the start of any field work under this contract. The Contractor shall make all necessary arrangements for locating the Engineer's field office at the construction site.

Sanitary facilities shall be provided which complies with the State and local governing authorities.

The contract lump sum price paid for Engineer's field office shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals for providing temporary field office for the Engineer, including supplying and paying for electricity, as specified in these special provisions, and as directed by the Engineer.

10-1.06 ELECTRONIC MOBILE DAILY DIARY SYSTEM DATA DELIVERY

Attention is directed to Sections 5-1.10, "Equipment and Plants," and 7-1.01A(3), "Payroll Records," of the Standard Specifications, and these special provisions.

The Contractor shall submit to the Engineer a list of each piece of equipment and its identifying number, type, make, model and rate code in accordance with the Department of Transportation publication entitled “Labor Surcharge and Equipment Rental Rate” which is in effect on the date the work is performed, and the names, labor rates and work classifications for all field personnel employed by the Contractor and all subcontractors in connection with the public work, together with such additional information as is identified below. This information shall be updated and submitted to the Engineer weekly through the life of the project.

This personnel information will only be used for this mobile daily diary computer system and it will not relieve the Contractor and subcontractors from all the payroll records requirements as required by Section 7-1.01A(3), "Payroll Records," of the Standard Specifications.

The Contractor shall provide the personnel and equipment information not later than 11 days after the contract award for its own personnel and equipment, and not later than 5 days before start of work by any subcontractor for the labor and equipment data of that subcontractor.

The minimum data to be furnished shall comply with the following specifications:

Data Content Requirements.--

1. The Contractor shall provide the following basic information for itself and for each subcontractor that will be used on the contract:

Caltrans contract ID	Alphanumeric; up to 15 characters.
Company name.	Alphanumeric; up to 30 characters.
Federal tax ID	Alphanumeric; up to 10 characters.
State contractor license	Alphanumeric; up to 20 characters.
Company type (prime or sub)	Alphanumeric; up to 10 characters.
Address (line 1).	Alphanumeric; up to 30 characters.
Address (line 2).	Alphanumeric; up to 30 characters.
Address (city).	Alphanumeric; up to 30 chars.
Address (2-letter state code).	Alphanumeric; up to 2 characters.
Address (zip code)	Alphanumeric; up to 14 characters.
Contact FirstNname.	Alphanumeric; up to 15 characters
Contact LastName	Alphanumeric; up to 20 characters
Telephone number (with area code).	Alphanumeric; up to 20 characters.
Company code: short company name.	Alphanumeric; up to 10 characters.
Type of work (Department-supplied codes)	Alphanumeric; up to 30 characters
DBE status (Department-supplied codes)	Alphanumeric; up to 20 characters.
Ethnicity for DBE status (Department-supplied codes).	Alphanumeric; up to 20 characters.
List of laborers to be used on this contract (detail specified below).	
List of equipment to be used on this contract (detail specified below).	

For example, one such set of information for a company might be:

04-072359
XYZ CONSTRUCTION, INC.
94-2991040
AL1649T
SUB
1240 9TH STREET
SUITE 600
OAKLAND
CA
94612
JOHN
SMITH
(510) 834-9999
XYZ
PAVING
MBE
BLACK

2. The Contractor shall provide the following information for each laborer who will be used on the contract:

Caltrans contract ID	Alphanumeric; up to 15 characters.
Company code (as defined above).	Alphanumeric; up to 10 characters.
Employee ID	Alphanumeric; up to 10 characters.
Last name.	Alphanumeric; up to 20 characters.
First name.	Alphanumeric; up to 15 characters.
Middle name.	Alphanumeric; up to 15 characters.
Suffix	Alphanumeric; up to 15 characters
Labor trade (Department-provided codes).	Alphanumeric; up to 10 characters.
Labor classification (Department-provided codes).	Alphanumeric; up to 10 characters.
Regular hourly rate.	Alphanumeric; up to (6,2)
Overtime hourly rate.	Alphanumeric; up to (6,2)
Doubletime hourly rate	Alphanumeric; up to (6,2)
Standby hourly rate.	Alphanumeric; up to (6,2)
Ethnicity (Department-provided codes).	Alphanumeric; up to 20 characters.
Gender.	Alphanumeric; up to 1 characters.

For example, one such set of information might be:

04-072359
XYZ
1249
GONZALEZ
HECTOR
VINCENT
JR.
OPR
JNY
12.50
18.75
25.00
0.00
HISPANIC
M

3. The Contractor shall provide the following information for each piece of equipment that will be used on the contract:

Caltrans contract ID	Alphanumeric; up to 15 characters.
Company code (as defined above).	Alphanumeric; up to 10 characters.
Company's equipment ID number.	Alphanumeric; up to 10 characters.
Company's equipment description.	Alphanumeric; up to 60 characters.
Equipment type (from Department ratebook).	Alphanumeric; up to 60 characters.
Equipment make (from Department ratebook).	Alphanumeric; up to 60 characters.
Equipment model (from Department ratebook).	Alphanumeric; up to 60 characters.
Equipment rate code (from Department ratebook).	Alphanumeric; up to 10 characters
Regular hourly rate.	Alphanumeric; up to (6,2)
Overtime hourly rate.	Alphanumeric; up to (6,2)
Standby hourly rate	Alphanumeric; up to (6,2)
Idle hourly rate.	Alphanumeric; up to (6,2)
Rental flag.	Alphanumeric; up to 1 character.

For example, one such set of information might be:

04-072359
XYZ
B043
CAT TRACTOR D-6C
TRACC
CAT
D-6C
3645
75.00
75.00
0.00
0.00
N

Data Delivery Requirements.--

1. All data described in "Data Requirements" of this section shall be delivered to the Department electronically, on 3 1/2" floppy disks compatible with the Microsoft Windows operating system. The Contractor shall provide a weekly disk and hard copy of the required correct updated personnel and equipment information for the Contractor and all the subcontractors and verified correct by the Engineer.
2. Data of each type described in the previous section (contractor, labor, and equipment information) will be delivered separately, each type in one or more files on floppy disk. Any given file may contain information from one contractor or from multiple contractors, but only one type of data (contractor, labor, or equipment information).
3. The file format for all files delivered to Caltrans shall be standard comma-delimited, plain text files. This type of file (often called “CSV”) is the most standard type for interchange of formatted data; it can be created and read by all desktop spreadsheet and desktop database applications. Characteristics of this type of file are:

    - All data is in the form of plain ASCII characters.
    - Each row of data (company, person, equipment) is delimited by a carriage return character.
    - Within rows, each column (field) of data is delimited by a comma character.

4. The files shall have the following columns (i.e., each row shall have the following fields):

    - Contractor info: 17 columns (fields) as specified in "Data Requirements #1", above.
    - Labor info: 15 columns (fields) as specified in "Data Requirements #2", above.
    - Equipment info: 13 columns (fields) as specified in "Data Requirements #3", above.

For every one type of file, columns (fields) must be in the order specified under "Data Requirements", above. All columns (fields) described under "Data Requirements" must be present for all rows, even if some column (field) values are empty. The first row of each file must contain column headers (in plain text).

5. Column (field) contents must conform to the data type and length requirements described in the "Data Requirement" section, above. In addition, column (field) data must conform to the following restrictions:

   - All data shall be uppercase.
   - Company type shall be either “PRIME” or “SUB”.
   - Labor trade and classification codes must conform to a list of standard codes that will be supplied by Department.
   - Contractor type of work codes and DBE status codes must conform to a list of standard codes that will be supplied by Department.
   - Ethnicity codes must conform to standard codes that will be supplied by Department.
   - Data in the "gender" column must be either "M" or "F".
   - Data in the "rental equipment" column must be either "Y" or "N".
   - Equipment owner's description may not be omitted. (The description, together with the equipment number, is how the equipment will be identified in the field.) Include manufacturer, rated capacity & trade description
   - Equipment type, make, model, and ratebook code shall conform to the Department of Transportation Publication entitled “Labor Surcharge and Equipment Rental Rate”, which is in effect on the date the work is performed. If the equipment in question does not have an entry in the book then alternate, descriptive entries may be made in these fields as directed by the Engineer.

6. The name of each file must indicate its contents, e.g., "labor.csv" for laborers, “equipment.csv” for equipment, and “contractor.csv” for contractors. Each floppy disk supplied to Caltrans must be accompanied by a printed list of the files it contains with a brief description of the contents of each file.

PAYMENT.--Payment for providing electronic mobile daily diary computer system data delivery will be made on a lump sum basis. The lump sum bid price for electronic mobile daily diary computer system data delivery will be made according to the following schedule:

The Contractor will receive not more than 16.7 per cent per month of the total bid price for electronic mobile daily diary computer system data delivery.

After the completion of the work, 100 per cent payment will be made for electronic mobile daily diary computer system data delivery less the permanent deduction, if any, for failure to deliver complete weekly electronic mobile daily diary computer system data in each month.

The contract lump sum price paid for electronic mobile daily diary computer system data delivery shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in electronic mobile daily diary computer system data delivery as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

The Department will retain an amount equal to 25 percent of the estimated value of the work performed during the first estimate period in which the Contractor fails to submit electronic mobile daily diary computer system data delivery conforming to the requirements of this section, as determined by the Engineer. Thereafter, on subsequent successive estimate periods the percentage the Department will retain will be increased at the rate of 25 percent per estimate period in which acceptable electronic mobile daily diary computer system data have not been submitted to the Engineer. Retentions for failure to submit acceptable electronic mobile daily diary computer system data shall be additional to all other retentions provided for in the contract. The retention for failure to submit acceptable electronic mobile daily diary computer system data will be released for payment on the next monthly estimate for partial payment following the date that acceptable electronic mobile daily diary computer system data is submitted to the Engineer.

The adjustment provisions in Section 4-1.03, "Changes," of the Standard Specifications, shall not apply to the item of electronic mobile daily diary computer system data delivery. Adjustments in compensation for electronic mobile daily diary computer system data delivery will not be made for any increased or decreased work ordered by the Engineer in furnishing electronic mobile daily diary computer system data.

10-1.07 NON-STORM WATER DISCHARGES

Non-storm water discharges shall conform to the requirements in Section 7-1.01G, “Water Pollution” of the Standard Specifications and these special provisions.

Conformance with the requirements of this section shall in no way relieve the Contractor from the Contractor's responsibilities, as provided in Section 7-1.11, "Preservation of Property," and Section 7-1.12, "Responsibility for Damage," of the Standard Specifications.

PILE DEWATER

Suspended solids shall be removed during the dewatering operation for piles and cofferdams, as specified in these special provisions.

Suspended solids shall be removed to the extent that visible, floating products are not apparent within the discharge. Also, the discharge shall be of a purity such that turbidity and apparent color beyond present natural background levels are not apparent within the receiving water body. The turbidity, measured in Nephelometric Turbidity Units (NTU), of the discharge shall not be greater than a 10 percent increase of the background turbidity. The point of effluent discharge shall not cause bottom sediments, aquatic vegetation, or surface soils to become dislodged or disturbed.

The Contractor shall graphically depict the dewatering process. The graphic shall show both a sectional and plan view that details the removal techniques for suspended solids. The graphic shall define the flow path and placement of pipes, hoses, pumps, and other equipment used to convey the discharge. In addition, the contractor shall provide a sketch that depicts the general position of the apparatus relative to the pile(s) or cofferdam(s) undergoing dewatering and the point of effluent discharge.

The Contractor shall describe the dewatering apparatus within a narrative format. The description shall include, but not be limited to, an estimate of the discharge volume, flow rate, and frequency; location of discharge; and the inspection and monitoring procedures related to the discharge.

The time to be provided for the Engineer's review and approval of the dewatering descriptions and drawings shall be 10 working days prior to beginning of pile driving operations. Operations requiring dewatering will not be permitted until the drawings and descriptions have been approved by the Engineer.

The Contractor shall conduct a daily inspection of the dewatering equipment, when in use, to ensure that all components are functional and routinely maintained to prevent leakage prior to removal of suspended solids. Any component of the apparatus that is found to be damaged or to affect the performance of the apparatus shall be either immediately repaired or replaced.

The Contractor shall monitor both the discharge and the receiving water body. The observations made during monitoring shall include the color, size of affected area, presence of suspended material, presence of water fowl or aquatic wildlife, wind direction and velocity, tidal condition, atmospheric condition, time, and date. In addition, the Contractor shall supplement the observations with photographs. During monitoring events, the Contractor shall obtain NTU measurements for the discharge turbidity and the receiving water (background) turbidity. The Contractor shall conduct monitoring, at a minimum, one hour prior to discharge, during the first ten minutes of initiating discharge, every four hours during discharge, and upon cessation of discharge. The observations and turbidity measurements shall be recorded daily in a tabular format known as the monitoring report provided within the Conceptual Storm Water Pollution Prevention Plan, as described within "Water Pollution Control" of these special provisions. The monitoring report, including photographs, shall be provided weekly to the Engineer, or as directed by the Engineer.

Observations or measurements which indicate that the discharge is of a purity such that turbidity and apparent color are beyond the present natural background levels shall be immediately reported to the Engineer. The discharge activity shall immediately cease, so that corrective actions are undertaken to repair, modify, or replace the equipment. The commencement of discharge activities shall be allowed upon approval by the Engineer.

STOCKPILE DEWATER

The Contractor shall prevent the flow of water, including ground water, surface runoff and tidal flow from entering any temporary stockpiles on land.

The Contractor shall depict and describe the methods and measures that will be used to dewater the temporary stockpiles, to seal the sides and bottom of the temporary stockpiles, and to prevent the flow of water into the stockpiles. The time to be provided for the Engineer's review and approval of the amendment shall be 10 working days prior to beginning temporary stockpile operations. Operations producing water will not be permitted until the plan has been approved by the Engineer.

All water removal from temporary stockpiles shall be handled in accordance with National Pollutant Discharge Elimination System (NPDES) Permits CAS000002 and CAS000003, issued by the State Water Resources Control Board. Copies of the permit and its amendments will be available for inspection and purchase at the Department of Transportation, Toll Bridge Duty Senior's Desk, 111 Grand Avenue, Oakland, California. Please call the Toll Bridge Duty Senior, telephone number (510) 286-5549 to reserve a copy of the document at least 24 hours in advance.

The Contractor is responsible for all work, records, reports, and costs involved in handling the water in accordance with the NPDES permit. The Contractor shall supply all analytical data, dewatering volume records, and written requests for discharge to the Engineer for approval prior to discharging any water. The Engineer shall have up to 7 calendar days for review and approval of discharge. Water that does not meet discharge permit requirements shall not be discharged on the site or to the storm drainage or to the sanitary sewer systems. The Contractor is responsible for either treating such water to meet

the permit requirements for discharge or hauling such water off site to an appropriately licensed liquid disposal facility. Penalties assessed against the State for permit non-compliance by the Contractor will be borne by the Contractor. Such penalties will be deducted from the monthly progress payment.

However, nothing in this section, "Non-Storm Water Discharge," will be construed as relieving the Contractor of full responsibility of complying with Section 7-1.16 "Contractor's Responsibility for the Work and Materials" of the Standard Specifications.

SPILL CONTINGENCY

The Contractor shall prepare and submit to the Engineer a contingency plan for the management of spills or leaks of any materials or wastes that may impact the water quality of the San Francisco Bay.

The contingency plan shall include instructions and procedures for reporting spills, and a list of spill containment and collection materials and equipment to be maintained onsite. The contingency plan shall be reviewed and updated at least every 90 calendar days.

LIQUIDS, RESIDUES AND DEBRIS

The Control and disposal of liquids, residues, and debris associated with the pile driving operation shall be described within a narrative format for review and approval by the Engineer. The narration shall, at a minimum, depict and describe the procedural and structural methods of detaining, collecting, and disposing of all slurries, liquids, residues, and debris associated with the operations. Sufficient redundancy shall be incorporated into the procedural and structural methods such that the liquids, residues, and debris are not conveyed into or become present in drainage systems, San Francisco Bay, or other water bodies.

MEASUREMENT AND PAYMENT

Full compensation for conforming to the requirements of this section shall be considered as included in the prices paid for the various contract items of work affected by this Section and no additional compensation will be allowed therefor.

10-1.08 WATER POLLUTION CONTROL

Water pollution control work shall conform to the provisions in Section 7-1.01G, "Water Pollution," of the Standard Specifications and these special provisions.

Water pollution control work shall conform to the requirements in the Construction Contractor's Guide and Specifications of the Caltrans Storm Water Quality Handbooks, dated April 1997, and addenda thereto issued up to and including the date of advertisement of the project, hereafter referred to as the "Handbook." Copies of the Handbook may be obtained from the Department of Transportation, Material Operations Branch, Publication Distribution Unit, 1900 Royal Oaks Drive, Sacramento, California 95815, Telephone: (916) 445-3520.

Copies of the Handbook are also available for review at 111 Grand Avenue, Oakland, California 94601. Please call the Toll Bridge Duty Senior, telephone number (510) 286-5549, to reserve a copy of the documents at least 24 hours in advance.

The Contractor shall know and fully comply with the applicable provisions of the Handbook and Federal, State, and local regulations that govern the Contractor's operations and storm water discharges from both the project site and areas of disturbance outside the project limits during construction.

Unless arrangements for disturbance of areas outside the project limits are made by the Department and made part of the contract, it is expressly agreed that the Department assumes no responsibility whatsoever to the Contractor or property owner with respect to any arrangements made between the Contractor and property owner to allow disturbance of areas outside the project limits.

The Contractor shall be responsible for the costs and for liabilities imposed by law as a result of the Contractor's failure to comply with the requirements set forth in this section "Water Pollution Control" including, but not limited to, compliance with the applicable provisions of the Handbook and Federal, State, and local regulations. For the purposes of this paragraph, costs and liabilities include, but are not limited to, fines, penalties, and damages whether assessed against the State or the Contractor, including those levied under the Federal Clean Water Act and the State Porter Cologne Water Quality Act.

In addition to the remedies authorized by law, an amount of the money due the Contractor under the contract, as determined by the Department, may be retained by the State of California until disposition has been made of the costs and liabilities.

The retention of money due the Contractor shall be subject to the following:

A. The Department will give the Contractor 30 days notice of the Department's intention to retain funds from partial payments which may become due to the Contractor prior to acceptance of the contract. Retention of funds from payments made after acceptance of the contract may be made without prior notice to the Contractor.

B. No retention of additional amounts out of partial payments will be made if the amount to be retained does not exceed the amount being withheld from partial payments pursuant to Section 9-1.06, "Partial Payments," of the Standard Specifications.
C. If the Department has retained funds and it is subsequently determined that the State is not subject to the costs and liabilities in connection with the matter for which the retention was made, the Department shall be liable for interest on the amount retained at the legal rate of interest for the period of the retention.

Conformance with the provisions in this section "Water Pollution Control" shall not relieve the Contractor from the Contractor's responsibilities as provided in Section 7, "Legal Relations and Responsibilities," of the Standard Specifications.

WATER POLLUTION CONTROL PROGRAM PREPARATION, APPROVAL AND UPDATES

As part of the water pollution control work, a Water Pollution Control Program, hereafter referred to as the "WPCP," is required for this contract. The WPCP shall conform to the provisions in Section 7-1.01G, "Water Pollution," of the Standard Specifications, the requirements in the Handbook, and these special provisions.

No work having potential to cause water pollution, as determined by the Engineer, shall be performed until the WPCP has been approved by the Engineer.

Within 14 days after the approval of the contract, the Contractor shall submit 3 copies of the WPCP to the Engineer. The Engineer will have 7 days to review the WPCP. If revisions are required, as determined by the Engineer, the Contractor shall revise and resubmit the WPCP within 7 days of receipt of the Engineer's comments. The Engineer will have 7 days to review the revisions. Upon the Engineer's approval of the WPCP, 3 additional copies of the WPCP incorporating the required changes shall be submitted to the Engineer. Minor changes or clarifications to the initial submittal may be made and attached as amendments to the WPCP. In order to allow construction activities to proceed, the Engineer may conditionally approve the WPCP while minor revisions or amendments are being completed.

The WPCP shall identify pollution sources that may adversely affect the quality of storm water discharges associated with the project and shall identify water pollution control measures, hereafter referred to as control measures, to be constructed, implemented, and maintained in order to reduce to the extent feasible pollutants in storm water discharges from the construction site during construction under this contract.

The WPCP shall incorporate control measures in the following categories:

A. Soil stabilization practices;
B. Sediment control practices;
C. Sediment tracking control practices;
D. Wind erosion control practices; and
E. Nonstorm water management and waste management and disposal control practices.

Specific objectives and minimum requirements for each category of control measures are contained in the Handbook.

The Contractor shall consider the objectives and minimum requirements presented in the Handbook for each of the above categories. When minimum requirements are listed for any category, the Contractor shall incorporate into the WPCP and implement on the project, one or more of the listed minimum controls required in order to meet the pollution control objectives for the category. In addition, the Contractor shall consider other control measures presented in the Handbook and shall incorporate into the WPCP and implement on the project the control measures necessary to meet the objectives of the WPCP. The Contractor shall document the selection process in conformance with the procedure specified in the Handbook.

The Contractor shall consider the objectives and minimum requirements presented in the Handbook for each of the above categories. The special minimum requirements listed below supersede the minimum requirements listed in the Handbook for the same category. When minimum requirements are listed for any category, the Contractor shall incorporate into the WPCP, and implement on the project, one or more of the listed minimum controls required in order to meet the pollution control objectives for the category. In addition, the Contractor shall consider other control measures presented in the Handbook and shall incorporate into the WPCP and implement on the project the control measures necessary to meet the objectives of the WPCP. The Contractor shall document the selection process in conformance with the procedure specified in the Handbook. The following special minimum requirements are established:

Category	Minimum Requirement(s)
Non-Storm Water and Waste Management Controls	CD7(2) Dewatering CD10(2) Material Delivery and Storage CD11(2) Material Use CD12(2) Spill Prevention and Control CD13(2) Solid Waste Management CD18(2) Vehicle and Equipment Cleaning CD19(2) Vehicle and Equipment Fueling CD20(2) Vehicle and Equipment Maintenance CD22(2) SchedulingCD7(2) Dewatering CD10(2) Material Delivery and Storage CD11(2) Material Use CD12(2) Spill Prevention and Control CD13(2) Solid Waste Management CD18(2) Vehicle and Equipment Cleaning CD19(2) Vehicle and Equipment Fueling CD20(2) Vehicle and Equipment Maintenance CD22(2) Scheduling
Wind Erosion Controls	CD26B(2) Geotextiles, Mats/Plastic Covers & Erosion Control Blankets

The WPCP shall include, but not be limited to, the following items as described in the Handbook:

A. Project description and Contractor's certification;
B. Project information;
C. Pollution sources, control measures, and water pollution control drawings; and
D. Amendments, if any.

The Contractor shall amend the WPCP, graphically and in narrative form, whenever there is a change in construction activities or operations which may affect the discharge of significant quantities of pollutants to surface waters, ground waters, municipal storm drain systems or when deemed necessary by the Engineer. The WPCP shall be amended if the WPCP has not achieved the objective of reducing pollutants in storm water discharges. Amendments shall show additional control measures or revised operations, including those in areas not shown in the initially approved WPCP, which are required on the project to control water pollution effectively. Amendments to the WPCP shall be submitted for review and approval by the Engineer in the same manner specified for the initially approved WPCP. Amendments shall be dated and attached to the on-site WPCP document.

The Contractor shall keep a copy of the WPCP, together with updates, revisions and amendments at the project site.

WPCP IMPLEMENTATION

Upon approval of the WPCP, the Contractor shall be responsible throughout the duration of the project for installing, constructing, inspecting, and maintaining the control measures included in the WPCP and any amendments thereto and for removing and disposing of temporary control measures. Unless otherwise directed by the Engineer or specified in these special provisions, the Contractor's responsibility for WPCP implementation shall continue throughout any temporary suspension of work ordered in conformance with the provisions in Section 8-1.05, "Temporary Suspension of Work," of the Standard Specifications. Requirements for installation, construction, inspection, maintenance, removal, and disposal of control measures are specified in the Handbook and these special provisions.

Soil stabilization practices and sediment control measures, including minimum requirements, shall be provided throughout the project. Implementation of soil stabilization practices and sediment control measures for soil-disturbed areas on the project site shall be completed, except as provided for below, not later than 20 days prior to the beginning of the winter season or upon start of applicable construction activities for projects which begin either during or within 20 days of the winter season.

Throughout the winter season, the active, soil-disturbed area of the project site shall be not more than 2.5 hectares. The Engineer may approve, on a case-by-case basis, expansions of the active, soil-disturbed area limit. The Contractor shall demonstrate the ability and preparedness to fully deploy soil stabilization practices and sediment control measures to protect soil-disturbed areas on the project site before the onset of precipitation. A quantity of soil stabilization and sediment control materials shall be maintained on site equal to 125 percent of that sufficient to protect unprotected, soil-disturbed areas on the project site. A detailed plan for the mobilization of sufficient labor and equipment shall be maintained to fully deploy control measures required to protect unprotected, soil-disturbed areas on the project site prior to the onset of precipitation. A current inventory of control measure materials and the detailed mobilization plan shall be included as part of the WPCP.

Throughout the winter season, soil-disturbed areas on the project site shall be considered to be nonactive whenever soil disturbing activities are expected to be discontinued for a period of 20 or more days and the areas are fully protected. Areas that will become nonactive either during the winter season or within 20 days thereof shall be fully protected with soil stabilization practices and sediment control measures within 10 days of the discontinuance of soil disturbing activities or prior to the onset of precipitation, whichever is first to occur.

Throughout the winter season, active soil-disturbed areas of the project site shall be fully protected at the end of each day with soil stabilization practices and sediment control measures unless fair weather is predicted through the following work day. The weather forecast shall be monitored by the Contractor on a daily basis. The National Weather Service forecast shall be used. An alternative weather forecast proposed by the Contractor may be used if approved by the Engineer. If precipitation is predicted prior to the end of the following work day, construction scheduling shall be modified, as required, and functioning control measures shall be deployed prior to the onset of the precipitation.

The Contractor shall implement, year-round and throughout the duration of the project, control measures included in the WPCP for sediment tracking, wind erosion, nonstorm water management, and waste management and disposal.

The Engineer may order the suspension of construction operations which create water pollution if the Contractor fails to conform to the provisions in this section "Water Pollution Control" as determined by the Engineer.

MAINTENANCE

To ensure the proper implementation and functioning of control measures, the Contractor shall regularly inspect and maintain the construction site for the control measures identified in the WPCP. The Contractor shall identify corrective actions and time needed to address any deficient measures or reinitiate any measures that have been discontinued.

The construction site inspection checklist provided by the Engineer shall be used to ensure that the necessary measures are being properly implemented, and to ensure that the control measures are functioning adequately. One copy of each site inspection record shall be submitted to the Engineer.

Inspections of the construction site shall be conducted by the Contractor to identify deficient measures, as follows:

A. Prior to a forecast storm;
B. After all precipitation which causes runoff capable of carrying sediment from the construction site;
C. At 24-hour intervals during extended precipitation events; and
D. Routinely, on a weekly basis.

If the Contractor or the Engineer identifies a deficiency in the deployment or functioning of an identified control measure, the deficiency shall be corrected immediately. The deficiency may be corrected at a later date and time if requested by the Contractor and approved by the Engineer in writing, but not later than the onset of subsequent precipitation events. The correction of deficiencies shall be at no additional cost to the State.

PAYMENT

Full compensation for conforming to the provisions in this section shall be considered as included in the prices paid for the various contract items of work involved and no additional compensation will be allowed therefor.

Those control measures which are shown on the plans and for which there is a contract item of work will be measured and paid for as that contract item of work.

The Engineer will retain an amount equal to 25 percent of the estimated value of the contract work performed during estimate periods in which the Contractor fails to conform to the provisions in this section "Water Pollution Control" as determined by the Engineer.

Retentions for failure to conform to the provisions in this section "Water Pollution Control" shall be in addition to the other retentions provided for in the contract. The amounts retained for failure of the Contractor to conform to the provisions in this section will be released for payment on the next monthly estimate for partial payment following the date that a WPCP has been implemented and maintained and water pollution is adequately controlled, as determined by the Engineer.

10-1.09 OBSTRUCTIONS

Attention is directed to Section 8-1.10, "Utility and Non-Highway Facilities," and Section 15, "Existing Highway Facilities," of the Standard Specifications and these special provisions.

The Contractor shall notify the Engineer and the appropriate regional notification center for operators of subsurface installations at least 2 working days, but not more than 14 calendar days, prior to performing any excavation or other work close to any underground pipeline, conduit, duct, wire or other structure. Regional notification centers include, but are not limited to, the following:

Notification Center	Telephone Number
Underground Service Alert-Northern California (USA)	1-800-642-2444 1-800-227-2600
Underground Service Alert-Southern California (USA)	1-800-422-4133 1-800-227-2600

The Contractor shall protect the University of California, Berkeley seismic monitoring cable. The Contractor shall field verify the location of the cable and ensure that the monitoring cable shall not be damaged.

10-1.10 MOBILIZATION

Mobilization shall conform to the provisions in Section 11, "Mobilization," of the Standard Specifications.

10-1.11 EXISTING HIGHWAY FACILITIES

The work performed in connection with various existing highway facilities shall conform to the provisions in Section 15, "Existing Highway Facilities," of the Standard Specifications.

10-1.12 PILING

Piling shall conform to the provisions in Section 49, "Piling," of the Standard Specifications, and these special provisions.

Geotechnical reports and also mill reports for the State-furnished piling are included in the "Information Handout" available to the Contractor as provided for in Section 2-1.03, "Examination of Plans, Specifications, Contract, and Site of Work," of the Standard Specifications.

Attention is directed to "Welding Quality Control" of these special provisions.

Attention is directed to "Public Safety," and "Order of Work" of these special provisions.

The requirements in Section 49-1.03, "Determination of Length," of the Standard Specifications shall not apply. All pile sections shall be clearly marked along their length in increments of 0.25 meter with more prominent markings every 1-meter. Marking shall be made by white paint lines 50 mm wide. They shall be accurately marked onto the pile with a tape measure that is at least 30 meter in length. Markings shall be visible from all directions and shall indicate cumulative length from the tip.

The first paragraph in Section 49-1.05, "Driving Equipment," of the Standard Specifications is amended to read:

Driven piles shall be installed with impact hammers that are approved in writing by the Engineer. Impact hammers shall be steam or hydraulic hammers only. Impact hammers shall develop sufficient energy to drive the piles to the specified tip elevation.

Two separate hammers are required to be onsite during pile driving operations. One with a maximum rated energy of not less than 500 kJ and not more than 1000 kJ (Hammer A) and one with a maximum rated energy of not less than 1700 kJ (Hammer B).

The use of followers or underwater hammers for driving piles will not be permitted.

For hammers with no visual way of observing the ram stroke, a calibrated printed readout showing hammer operating parameters including energy during driving operation shall be provided to the Engineer by the Contractor.

Pile installation procedures shall include provisions for the presence of upper strata of soft soils that allow piles to penetrate significant distances under self-weight and the weight of the hammer; lower strata of dense soils that result in hard driving; irregular interbedded soil lenses that gain strength during delays in driving; wind, wave and tidal forces, and required pile batter.

PILE ALIGNMENT AND SUPPORT

Piles shall be laterally supported during installation and splicing to ensure alignment accuracy and stability. Alignment and support devices, hereafter referred to as pile guide template(s), shall be provided. The Contractor shall be responsible for the design of the pile guide template and it shall be fabricated to satisfy the following:

1. Provide and maintain the specified axial alignment of the pile within 10 millimeters per meter of pile length.
2. Provide support and stability for the pile length projecting above the mudline plus one full add-on segment of pile and the full operating weight of the hammer at the top of the pile.
3. Provide sufficient resistance to wind, wave and current conditions.
4. Minimize friction between the guide template and pile as the pile is driven.

5. Provide sufficient resistance to forces associated with the pile running under its own weight and/or the weight of the hammer including a mechanism to prevent the head of the running pile from penetrating deep enough to cause difficulty with the subsequent add-on segment, add-on support and welding, and movement through the guide template without deformation of the guide template system.
6. Provide adequate workspace for pile welding, cutting and inspection.

Detailed working drawings and design calculations for pile guide templates shall be submitted to the Engineer for review and approval in conformance with Section 5-1.02, "Plans and Working Drawings," of the Standard Specifications. The drawings and design calculations shall be signed by an Engineer who is registered as a Civil Engineer in the State of California. Five sets of the drawings and one copy of the design calculations shall be submitted.

The Engineer shall have 15 working days to review drawings and design calculation after a complete set has been received, as determined by the Engineer, and prior to fabricating the pile guide template. Should the Engineer fail to complete his review within the time allowance, and if, in the opinion of the Engineer, the Contractor's controlling operation is delayed or interfered with by reason of the delay in the driving system submittal review, the delay will be considered a right of way delay as specified in Section 8-1.07, "Liquidated Damages," in the Standard Specifications.

The first and second paragraphs in Section 49-5.02, "Splicing," of the Standard Specifications shall not apply.

SPLICING

Steel pile splices shall conform to the requirements of AWS D 1.1 and these special provisions. Steel pipe pile splices shall be complete joint penetration groove welds.

Ends of steel pipe piling to be spliced shall be removed to a sound and uniform section conforming to the tolerances for diameter, edge alignment and roundness required to meet the steel pile splice welding requirements. Pipe ends shall be field cut using automated guided cutting equipment. Manual flame cutting shall not be used.

WELDING AND NON-DESTRUCTIVE TESTING FOR SPLICING OF STATE-FURNISHED STEEL PIPE PILING

General

State-furnished steel pipe piling conforms to the provisions of ASTM Designation A 709, GR 50 and also to the provisions of API 2B.

Wherever reference is made to the following American Petroleum Institute (API) specifications in the Standard Specifications, on the project plans, or in these special provisions, the year of adoption for these specifications shall be as follows:

API Codes	Year of Adoption
API 2B	1990

Handling devices may be attached to steel pipe piling. Welds attaching these devices shall be aligned parallel to the axis of the pile and shall conform to the requirements for field welding specified herein. Permanent bolted connections shall be corrosion resistant. Prior to making attachments, the Contractor shall submit a plan to the Engineer that includes the locations, handling and fitting device details, and connection details. Attachments shall not be made to the steel pipe piling until the plan is approved in writing by the Engineer. The Engineer shall have 7 days to review the plan. Should the Engineer fail to complete the review within 7 days, and if, in the opinion of the Engineer, the Contractor's controlling operation is delayed or interfered with by reason of the delay in reviewing the plan, the delay will be considered a right of way delay in conformance with the provisions in Section 8-1.09, "Right of Way Delays," of the Standard Specifications.

All field splice welding of pipe piling shall be by semi-automatic or automatic welding machines. The Contractor shall provide durable enclosures at field splice locations to allow welding during inclement weather conditions. Weld repairs may be performed by using the SMAW method.

Steel pile cover plates and navigational lighting system supports shall be welded in conformance with AWS D1.1. Welds shall be visually inspected and no further NDT will be required.

All welding of the State-furnished steel piling and steel pipe for weld qualifications is defined as field welding and shall conform to the following requirements:

A. After the WQCP is approved as specified in "Welding Quality Control," elsewhere in these special provisions, and prior to welding production piling, the weld procedure approved in the WQCP shall be demonstrated using the 2 State-furnished steel pile sections that are 600 mm long and 70 mm thick. The steel pipe sections shall be spliced along the entire pipe circumference while the pipe sections are held in the same batter angle as shown on the plans for the batter piling. Welds shall be made in the near horizontal position with the joint tending towards the overhead

position to the maximum angle anticipated by the pile batter. The root pass weld shall be completed around the entire pipe circumference. After the splice is completed and inspected in conformance for welding of production piling, samples shall be prepared and tested. Tests shall include Charpy V-Notch tests of the weld metal and heat affected zone at -18° C. Charpy V-Notch samples shall be prepared and tested in conformance with the requirements of Section 5.16.4 of AWS D1.5 for the weld metal plus 5 additional samples and tests in the heat affected zone. The weld metal shall meet 27 Joules minimum average, and the results for the heat affected zone shall be included in the weld report.

B. Prior to positioning any 2 sections of steel pipe to be spliced by field welding, the Contractor shall equalize the offsets of the pipe ends to be joined.
C. All welds made shall be in the horizontal position (or near-horizontal position for batter piles) (where the longitudinal pipe axis is vertical) and shall be single-bevel groove welds. Joint fit-ups shall conform to the requirements for tubular sections in AWS D1.1 and these special provisions.
D. The minimum thickness of the backing ring shall be 6 mm, and the ring shall be continuous. Splices in the backing ring shall be made by complete penetration welds. These welds shall be completed and inspected prior to final insertion into a pipe end. Attachment of backing rings to one of the two pile sections being joined shall be by continuous fillet weld along the inside surface of the lower pile. Attachment of the backing ring to the end of the pile section being stabbed shall be done using the minimum size and spacing of tack welds that will securely hold the backing ring in place. Tack welding shall be done in the root area of the weld splice or to spacers. Cracked tack welds shall be removed and replaced prior to subsequent weld passes. The gap between the backing ring and the steel pipe piling wall shall be no greater than 2 mm. Gaps greater than 2 mm but not exceeding 6 mm may be seal welded using E7018 SMAW. Weld profiles shall meet the requirements of AWS D1.1. Gaps greater than 6 mm shall be repaired by welding using E7018 SMAW, the weld groove ground to provide the intended groove shape and inspected using magnetic particle testing to the satisfaction of the Engineer prior to starting the groove weld. Repair by welding gaps that are greater than 8 mm shall not be allowed unless the process is reviewed and approved by the Engineer prior to welding. The locations where fit-up gaps exceed 2 mm shall be marked so that they can be referenced during NDT. Backing rings shall have a minimum width of 1 1/2 times the thickness of the pile to be welded so that they will not interfere with the interpretation of the NDT.
E. For steel pipe with an outside diameter greater than 1.1 m, and with a wall thickness greater than 25.4 mm, the root opening tolerances may be increased to a maximum of 5 mm over the specified tolerances.
F. Weld filler metal shall conform to the requirements shown in AWS D1.5 for the welding of ASTM Designation: A 709, Grade 50 steel. Low hydrogen electrodes, defined as those with H4 and H8 designators assigned by the filler metal manufacturer, shall be used. Prequalified welding procedures are not permitted. All welding procedures shall be qualified by testing as required in AWS D1.5.
G. The welding filler materials (wire/electrode and flux, if used) shall be an essential variable for welding procedure qualification; i.e., any change in the filler material brand name or type shall require requalification of the welding procedure.
H. GMAW is prohibited.
I. For field welding, including attaching backing rings and making repairs, the preheat and interpass temperature shall be in conformance with AWS D1.1, Table 3.2, Category C; and the minimum preheat and interpass temperature shall be 66 °C, regardless of the pipe pile wall thickness or steel grade. In the event welding is disrupted, preheating to 66 °C must occur before welding is resumed. For welds with required preheat temperatures greater than 66° C, preheat temperatures shall be achieved and maintained using electric resistance heating bands for the entire length of the weld. The heaters shall be controlled by attached thermocouples at spacings not exceeding 2 m. For these welds, the minimum preheat temperature shall be maintained continuously from beginning to completion of the entire weld, even if welding is disrupted.
J. Welds shall not be water quenched. Welds shall be allowed to cool unassisted.

Nondestructive Testing of Field Welds

Ultrasonic testing (UT) shall be used as the method of NDT for splices made by field welding steel pipe piling. This NDT shall be used for each field weld, including welds that are made onto a portion of the steel pipe piling that has been installed and any repair made to a splice weld. UT shall be performed over the full length of the weld. The cover pass shall be ground smooth at the locations to be tested. In addition, Magnetic Particle testing (MT) shall be used for 100% of the root pass of all field welds unless otherwise directed by the Engineer. The acceptance criteria shall conform to the requirements of AWS D1.1, Section 6, for cyclically loaded nontubular connections subject to tensile stress. If repairs are required in a portion of the weld, additional UT shall be performed. The additional UT shall be made over the full length of the repair and shall extend on both sides of the repair for a length equal to 10 percent of the length of the pipe outside circumference.

UT shall be performed in accordance with a written procedure that shall be reviewed by the Engineer before use. The UT procedure shall address the unambiguous interpretation of indications from the weld root and backing and shall describe the treatment of root fit-up repairs. The procedure shall define all measurements and/or marking that may be required prior to the start of welding. This procedure shall be demonstrated during weld procedure qualification to verify its effectiveness in differentiating root and repair conditions.

Radiographic, magnetic particle, or ultrasonic testing shall be used to assure soundness of backing rings in conformance with the requirements in AWS D1.1, Section 6.

The elevation of the soil plug inside the pile shall be measured and recorded by the Contractor following the driving of each pile segment. Records shall be submitted to the Engineer.

At the conclusion of driving, pile heads at cut-off elevation shall be within a tolerance of 250 mm (measured radially) from the ideal horizontal locations shown.

For each 25 mm increment that each pile head at cut-off is outside of the tolerance specified (as measured radially from the ideal location), the State will deduct $1000.00 from any monies due to or to become due to the Contractor (up to a maximum of $10,000 per pile for a pile that is 250 mm, or greater, out of tolerance).

JETTING AND DRILLING

Jetting to obtain the specified penetration in conformance with the provisions in Section 49-1.05, "Driving Equipment," of the Standard Specifications shall not be used for driven type piles.

Center Relief Drilling

Prior to beginning pile installation, the Contractor shall furnish, on site, all drilling and drill handling equipment, materials, and incidentals as may be required to perform center relief drilling for the duration of the pile driving phase of operations. The center relief drilling equipment shall be sufficient to drill a 0.9-meter diameter hole at least the full length of the pile.

When directed by the Engineer, the Contractor shall perform center relief drilling of the soil plug within the steel piles as needed to assist pile driving. Multiple passes of the drill may be required.

Should center relief drilling be required by the State, the Contractor shall furnish labor and additional tools, equipment, and incidentals as required to perform the drilling and to remove and dispose of excavated material in conformance with the permits for this Contact and these special provisions. The excavated materials are classified as regulated waste. The Contractor shall take all necessary precautions for handling and disposal of regulated waste. The work to drill, remove, and dispose of excavated material will be paid for as extra work as provided in Section 4-1.03D, "Extra Work," of the Standard Specifications.

DYNAMIC AND ALIGNMENT MONITORING

All driven piles will be monitored during the driving of the upper 3 Sections (B, C, and D) of each pile for dynamic response to the driving equipment as well as monitoring for vertical and horizontal alignment. Monitoring will be done by State forces using State-furnished dynamic pile analyzer monitoring instruments and survey equipment.

The Contractor shall provide electric power (120-volt, 60 cycles stable power) for the State's monitoring equipment, including access to the piles and working space and shelter for State monitoring personnel.

Pile sections to be dynamically monitored shall be made available to State forces 2 working days prior to driving. The piles shall be safely supported a minimum of 150 mm off the supporting surface in a horizontal position on at least 2 support blocks. The pile sections shall be positioned so that State forces have safe access to the entire pile length and circumference for the installation of monitoring equipment anchorages and control marks for monitoring. Three 5.6-mm diameter holes shall be drilled and tapped at the upper end at 4 equal spaces around the pile perimeter for each of pile sections B, C, and D at the Engineer’s direction. The Contractor shall rotate the piles on the blocks as directed by the Engineer.

Piles to be dynamically monitored shall be prepared and driven in the following sequence:

A. The Contractor shall temporarily suspend driving operations for approximately 60 minutes at the direction of the Engineer and shall bolt the instrument package securely to plugs or expansion anchors previously installed in the pile by the State. The Contractor shall connect electrical cables to the instrument package as directed by the Engineer.
B. Driving operations shall resume as directed by the Engineer. Driving operations shall be suspended when the pile section has been driven to the required tip elevation for that section, as directed by the Engineer.
C. The Contractor shall remove the cables and instrument package from the pile and deliver them to the Engineer.
D. Following pile section add-on, welding and weld inspection, the Contractor shall repeat steps A through C above until all pile sections are driven.
E. Redriving shall be conducted in accordance with the sequence specified in Section "Order of Work" of these special provisions. For each re-drive on each pile, the Contractor shall re-attach the dynamic monitoring instrumentation

package and cables, and then drive the pile as directed by the Engineer. The Contractor shall remove the cables and instruments from the monitored pile and deliver them to the Engineer at the end of driving operations.

The Contractor shall be responsible for damage to the State's cables and instruments caused by the Contractor's operations, and shall replace damaged cables or instruments in kind with new material.

The time required for the Contractor to install and remove the cables and instrument package from the pile sections shall not constitute a delay to the Contractor's operations.

During driving, the measured combined static and dynamic pile stress shall not exceed 95 percent of the yield strength of the steel.

WAVE EQUATION

The second paragraph of Section 49-1.03, "Determination of Length," and paragraphs 3 and 4 of Section 49-1.08, "Bearing Value and Penetration," of the Standard Specifications shall not apply to the pile specified herein.

Driving System Submittal

Prior to installing driven piling, the Contractor shall provide a driving system submittal, including information requested on the Pile and Driving Data Form and manufacturer's specifications for hammers. All proposed driving systems (i.e., each hammer that may be brought onto the site) shall be included in the submittal.

The Engineer shall have 15 working days to review a driving system submittal after a complete set has been received, as determined by the Engineer, and prior to installing piling. Should the Engineer fail to complete his review within the time allowance, and if, in the opinion of the Engineer, the Contractor's controlling operation is delayed or interfered with by reason of the delay in the driving system submittal review, the delay will be considered a right of way delay in conformance with the provisions in Section 8-1.07, "Liquidated Damages" in the Standard Specifications.

The Contractor shall use the driving system and installation methods described in the approved driving system submittal. Any change in hammers from those submitted and approved by the Engineer shall also meet the requirements for driving system submittals. Revised and new driving system submittals shall be approved by the Engineer prior to using corresponding driving systems. The Engineer shall have 15 working days to review each revised and each new driving system submittal after a complete set has been received, as determined by the Engineer.

Approval of pile driving equipment shall not relieve the Contractor of his responsibility to drive piling free of damage.

Full compensation for driving system submittals shall be considered as included in the contract unit price paid for install pile and no additional compensation will be allowed therefor.

MEASUREMENT AND PAYMENT (PILING)

Measurement and payment for install 2.438-m steel pipe pile (State-furnished) piles shall conform to the provisions in Sections 49-6.01, "Measurement," and 49-6.02, "Payment," of the Standard Specifications and these special provisions.

The contract unit price paid for install 2.438 m steel pipe pile (State-furnished) shall include full compensation for furnishing all labor, materials (including pile guide template(s)), tools, equipment, and incidentals, and for doing all work involved in taking receipt of State-furnished pile sections in the lengths shown, for cutting-off and weld-splicing the piles, for driving the monitored piles in the sequence and with the driving equipment specified, for re-driving the monitored piles in the sequence and with the driving equipment specified, for providing access for the Engineer and Engineer's representative (including provision of sufficient lighting of work area), for installing and removing the instruments from the pile, and for installing plates covering the pile tops, including marking of piling and supply of electrical power for State-furnished and operated testing equipment, as shown of the plans and as specified in the Standard Specifications and these special provisions, and as directed by the Engineer. Full compensation for designing, furnishing and installing pile guide template(s), shall be considered as included in the contract unit price paid for install 2.438 m steel pipe pile (State-furnished) and no additional compensation will be allowed therefor.

Full compensation for maintaining 2 hammers, full time, on-site during the pile driving phase of the contract shall be considered as included in the contract unit price paid for install 2.438 m steel pipe pile (State-furnished) and no additional compensation will be allowed therefor.

Full compensation for furnishing equipment specified to perform center relief drilling shall be considered as included in the contract unit price paid for install 2.438 m steel pipe pile (State-furnished) and no additional compensation will be allowed therefor.

Should center relief drilling be required by the State, the Contractor shall furnish labor and additional tools, equipment, and incidentals as required to perform the drilling and to remove and dispose of excavated material in conformance with the ´RWQCB Permits' and these special provisions. The work to drill, remove, and dispose of material will be paid for as extra work as provided in Section 4-1.03D, "Extra Work," of the Standard Specifications.

Full compensation for conforming to the requirements of "Welding and Nondestructive Testing for Splicing State-Furnished Steel Pipe Piling" of these special provisions shall be considered as included in the contract prices paid for the various contract items of work involved and no additional compensation will be allowed therefor.

Full compensation for driving system submittals shall be considered as included in the contract unit price paid for install pile and no additional compensation will be allowed therefor.

10-1.13 NAVIGATIONAL LIGHTING

Navigational lighting assemblies shall be furnished and installed at the locations shown on the plans atop each driven pile, and as specified in these special provisions.

Navigational lighting equipment shall have the following characteristics conforming to the U.S. Coast Guard and Code of Federal Regulations, Title 33, Section 64 and all of their applicable codes:

1. 360 degree all-around white light.
2. Light shall be designed to emit 15 flashes per minute.
3. Emitted light shall be visible a minimum of 4.8 kilometers (3 miles).
4. Lighting assembly shall have a marine-quality tamper-proof hardware, encapsulated and waterproof, resistant to UV light, impact resistant polycarbonate lens and shall be solar powered.
5. Lighting assembly shall be guaranteed to fully operate maintenance free for a minimum of 3 years from the date of acceptance.
6. Lighting assembly shall utilize an LED lamp, a solar panel (minimum 12V), and a re-charging battery (minimum 12V) for energy storage. Lamp, storage battery, and controls shall be contained in the same housing.
7. Lighting assembly shall operate a minimum of 5 days in total darkness and at least 10 days in overcast conditions. It shall flash at night and during periods of insufficient sunlight and shall be controlled by a photoelectric device.

Steel mast and mounting bracket shall be constructed in accordance with the details shown on the plans. Steel mast and mounting plate shall conform to the requirements in Section 75, "Miscellaneous Metal," of the Standard Specifications, except for payment.

The Contractor shall be responsible for substantially attaching the Navigational lighting assemblies to supporting masts either by bolting, or threaded attachments. The Contractor shall submit working drawings showing the attachment details to the lighting assembly.

Navigational lighting equipment for use in navigational lighting shall be any of the approved models listed below, or equal:

a) Model BG-SOL-LED-12.120-10W18A-CL-15, manufactured by Julian A. McDermott Corp., 1639 Stevens Street, Ridgewood, NY 11385, Telephone (800) 842-5708, Fax: (718) 381-0229.
b) Model SEALITE SL-23 Single Module Solar Lantern, manufactured by Watermark Navigation Systems, 12 Gilford East Drive, Gilford, NH 03246, Telephone (603) 524-6066, Fax: (603) 527-0666.

Navigational lighting will be paid lump sum.

The contract lump sum price paid for navigational lighting shall include full compensation for furnishing all labor, materials (including miscellaneous metal supports), tools, equipment, and incidentals, and for doing all the work involved in installing navigational lighting, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

10-1.14 SOUND-ATTENUATING SYSTEMS

This work shall consist of designing, furnishing, installing, monitoring, testing, and removing two sound-attenuating systems to attenuate underwater noise (sound pressure) generated during pile driving operations. Sound-attenuating systems shall conform to the requirements in these special provisions. The term “system” as used in this Section of the special provisions shall be understood to mean sound-attenuating system. For purposes of this Specification, pile installation demonstration refers to the sequences of operations 1 through 19 described in Section 10-1.01, Order of Work of these Special Provisions; pile installation refers to the all activities involved with driving a single pile; pile driving refers to the time when the hammer is physically driving the pile.

Sound from the pile driving operations at Pile Number 2 shall be attenuated by an air bubble curtain and sound from pile driving operations at Pile Number 3 shall be attenuated by a floating barrier with a contained aerating mechanism. Sound from pile driving operations at Pile No. 1 will not be attenuated. The pile-driving barge shall be isolated from the noise-producing operations. This isolation shall be such that noise from the pile driving operation is not transmitted through the barge to the water column. Padding and avoidance of metal-to-metal contact are appropriate isolation measures to be considered by the Contractor.

The Contractor shall monitor the condition of the systems and prepare inspection reports daily during pile installation operations and no less than every other day during periods of no activity. The Contractor shall provide a diver to inspect the condition of the systems and submit inspection reports for each system describing condition of system, hours of operation, if

applicable, and any damage, malfunction, deterioration, and repairs. Inspection reports shall list environmental and operating conditions observed during operation of the system and include water velocity, water-surface conditions, air and water temperatures, and positioning of pile-driving equipment relative to the attenuating systems. Other monitoring shall be as specified under "Sound Attenuation Effectiveness Monitoring" and "Marine Mammal Monitoring" elsewhere in these special provisions.

GENERAL SYSTEM DESCRIPTION

The Contractor's design, installation, maintenance, and operation, as applicable, of each system shall take into account the site conditions and the requirements of pile installation. Factors to be taken into account include anchoring, moving, and dismantling system; excluding marine mammals; configuration of bay bottom; water velocity; water-surface conditions; air and water temperatures; and positioning of pile and pile-driving equipment relative to the attenuating systems.

Water velocity at site is expected to vary from zero to 2 knots and vary in direction due to changes in tidal flow. The design of the systems shall ensure that the systems extend from bay bottom to the water surface during maximum water-current conditions and accommodate tide changes.

Each system shall completely surround the site of the pile. The barge deploying or containing the pile-driving equipment is not required to be contained within the system.

Air compressors, where utilized, shall be mounted on rubber pads or other sound isolating devices, in order to decrease the sound transmitted from the compressors to the water column.

The Contractor shall mark the sound-attenuating system for navigation safety in accordance with United States Coast Guard requirements. The Contractor shall obtain all required permits in accordance with Section 7-1.04, "Permits and Licenses," of the Standard Specifications.

WORKING DRAWINGS

The Contractor shall submit working drawings with supplement for each sound-attenuating system to the Engineer for approval in conformance with the provisions in Section 5-1.02, "Plans and Working Drawings," of the Standard Specifications and these special provisions. For initial review six sets shall be submitted. After review, 9 sets shall be submitted for final approval and for use during construction. Drawings and calculations shall include mechanical and structural details and calculations for all aspects of the systems such as air delivery, anchorage, and flotation billet.

Working drawings shall be 559 mm x 864 mm or 279 mm x 432 mm in size. Each drawing and supplement calculation sheet shall include the jobsite, name of the structure as shown on the contract plans, District-County-Route, bridge number and contract number.

Working drawings with supplement shall be signed by a Civil Engineer who is registered in the State of California. Working drawings shall include the following:

A. Working drawings for each sound-attenuating system including mechanical and structural details.

The supplement to the working drawing shall include the following:

A. Checked design calculations.
B. Materials list for materials to be used including the name of the manufacturer and the source, model number, description, and standard of manufacture.
C. Manufacturer's descriptive data and catalog cuts for all products proposed for the sound-attenuating systems including air compressors.
D. Contractor's proposed means of isolating noise-producing systems on the pile-driving barge.

Within 15 working days after the approval of the contract, the Contractor shall submit 6 copies of the working drawings, with supplements, to the Engineer. The Engineer will have 15 working days to review the working drawings. If revisions are required, as determined by the Engineer, the Contractor shall revise and resubmit the working drawings within 15 working days of receipt of the Engineer's comments. The Engineer will have 5 working days to review the revisions and will notify the Contractor when the working drawings with supplement are complete. Should the Engineer fail to complete the working drawing submittal review and provide notification within the time specified and if, in the opinion of the Engineer, the Contractor's controlling operation is delayed or interfered with by reason of the delay in reviewing the working drawing submittal and providing notification, the delay will be considered a right of way delay as specified in Section 8-1.08, "Right of Way Delays," of the Standard Specifications.

Other Submittals

The Contractor shall submit inspection reports in conformance with Section 5-1.02, "Plans and Working Drawings," of the Standard Specifications and as described in this Section of these Special Provisions within 48 hours following inspection. Within 15 working days after the completion of the pile installation demonstration, the Contractor shall submit its

recommendations for future changes in the design and application of the sound attenuation systems utilized in the contract. Recommendations shall include possible ways to enhance the systems' sound attenuation properties, durability and ease of use.

AIR BUBBLE CURTAIN

This work shall consist of deploying an air bubble curtain to attenuate pile driving noise (sound pressure). The work shall include designing, furnishing, installing, operating, maintaining, and removing an air bubble manifold and associated equipment as specified herein. Air bubble curtain shall be used to attenuate underwater sound pressure from the pile driving at Pile Number 2.

System Description

Definition: An air bubble curtain or air screen is composed of an air compressor(s), supply lines to deliver the air, distribution manifolds or headers, perforated aeration pipes, and a frame. The frame facilitates transport and placement of system, keeps the aeration pipes stable, and provides ballast to counteract the buoyancy of the aeration pipes in operation.

Air bubble manifold system shall consist of three lines of perforated aeration pipes spaced 150 mm from each other in order to provide three rows of bubbles around the pile installation operation. The system may consist of any ring or straight segment arrangement. Noncontiguous segments shall overlap by at least one meter. Bubble holes shall be one-mm diameter drilled through both walls of the pipe (for a total of two holes at each drilled location) and spaced at 25 mm. Air flow shall be sized to provide a minimum bubble flux of 2.4 liters/sec/meter of pipe length. Air bubble manifold or manifolds shall be placed to have a minimum radius of 15 m measured from the center of pile.

The Contractor’s design calculation submittal shall include calculations showing pressure loss in the piping system and estimated flows from the most removed orifice of the aeration piping.

The Contractor shall completely remove the air bubble curtain system at the completion of the project and the system will remain the property of the Contractor.

FLOATING BARRIER WITH AN AERATING MECHANISM

This work shall consist of designing, furnishing, installing, operating, maintaining, and removing full-water depth, floating barrier consisting of a minimum of two layers of fabric and a fabric-contained aerating mechanism. The floating barrier with its aerating mechanism shall be designed to attenuate underwater pile driving noise (sound pressure). The floating barrier shall be used to attenuate underwater sound pressure from the pile driving at Pile Number 3.

Sound level testing shall be conducted without and with air bubbles as specified in "Sound Attenuation Effectiveness Monitoring" elsewhere in these special provisions.

System Description

Floating barrier with aerating mechanism shall be laid on or sealed and secured to the bay bottom and suspended from the top of the water with a floatation billet. The barrier shall be equipped with an aerator mounted at its bottom and an air injection system designed to create a continuous air bubble wall between the two fabric layers.

Fabric shall be water permeable so as to not minimize the flow of water through it.

Gunderboom, Inc., the manufacturer and supplier of Boom Boom, is the only manufacturer of the specified floating barrier with aerating mechanism that is known to the State. Boom-Boom, or equal, shall be designed and modified as specified herein with a contained aerating mechanism to develop sound-attenuating properties.

Gunderboom, Inc., has agreed to furnish the floating barrier with aerating mechanism and other equipment and services described in these special provisions at the guaranteed prices as follows: $427,352.00.

The above prices shall include sales tax and delivery to the job site and shall include designing, furnishing, installing, operating, and maintaining one 14 meter (46 foot) diameter floating barrier with aerating mechanism. This price also includes removal of said system at the end of the pile installation. The system will remain the property of Gunderboom, Inc. The above price will be guaranteed to any bidder ordering such materials and services prior to September 30, 2000. The system will be delivered within sixty (60) days of the acceptable order date. The price assumes single shift operation per day. The Contractor shall negotiate the costs for additional shifts with Gunderboom, Inc. and shall include such costs in the contract lump sum price for the floating barrier system.

Other equipment and services to be provided by Gunderboom, Inc., included in the above price~~s~~, are as follows:

A. Compressors, valving, hoses, and spares.
B. Diving services for installation, monitoring, and maintenance of floating barrier with aerating mechanism.
C. Operations technician.
D. Participation in coordination and planning with the Contractor.
E. Engineering assistance regarding the Contractor’s work plan.
F. Input on ~~to~~ inspection reports including description of condition of floating barrier with aerating mechanism, hours of operation, and any damage, malfunction, deterioration, and repairs to floating barrier with aerating mechanism.

G. Barrier system working drawings and supplement as specified under "Working Drawings" herein in connection with floating barrier with aerating mechanism.
H. Removal of the floating barrier with aerating mechanism from the site after it has been lifted by the Contractor.

The Contractor shall furnish all materials, equipment, incidentals, and labor for the following in connection with the deployment, maintenance and removal of the floating barrier with aerating mechanism:

A. Provide and maintain floating platform for compressors, including furnishing fuel and providing fueling service for compressors.
B. Provide and operate lifting devices of sufficient size to place, maintain, and remove floating barrier with aerating mechanism, compressors, and related equipment.
C. Provide adequate space on barge for 6.1 meter (20 foot) Connex-type work container.
D. Provide access to Contractor's vessels and work platforms for Gunderboom personnel.
E. Isolate noise-producing systems from floating platform.
F. Prepare and submit working drawings in regard to Contractor's proposed means of isolating noise-producing systems including compressors on floating platform.
G. Prepare and submit inspection reports in connection with floating barrier with aerating mechanism.

MEASUREMENT AND PAYMENT

Sound-attenuating systems will be measured and paid for at the lump sum prices for air bubble curtain and floating barrier with aerating mechanism.

The contract lump sum price paid for air bubble curtain shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in air bubble curtain, complete in place, including maintaining and removing air bubble curtain, including manifold and associated equipment, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

The contract lump sum price paid for floating barrier shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in floating barrier with aerating mechanism, complete in place, including maintaining and removing floating barrier with aerating mechanism, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

Full compensation for inspections and monitoring of sound-attenuating systems and isolation of pile-driving barge from pile installation noise shall be considered as included in the contract lump sum prices paid for the sound attenuating systems and no additional compensation will be allowed therefor.

10-1.15 MARINE MAMMAL MONITORING

The work shall consist of preparing a marine mammal monitoring plan, providing the services of a qualified team of observers, monitoring marine mammals prior to, during, and after pile driving operations and reporting as specified in these special provisions. The work shall include reporting and evaluating marine mammal data and coordinating marine mammal monitoring activities with pile installation activities, and noise and vibration monitors. For purposes of this Specification, pile installation demonstration refers to the sequences of operations 1 through 19 described in Section 10-1.01, Order of Work of these Special Provisions; pile installation refers to the all activities involved with driving a single pile; pile driving refers to the time when the hammer is physically driving the pile.

The Contractor shall comply with all requirements, regulations, and conditions set forth by National Marine Fisheries Service (NMFS) in the Incidental Harassment Authorization issued for the project, including monitoring and reporting requirements. Copies of the Incidental Harassment Authorization are available for inspection at the Toll Bridge Duty Senior at the District 04 Office, 111 Grand Avenue, Oakland, California 94612, email duty_senior_tollbridge_district04@dot.ca.gov, telephone number (510) 286-5549.

Marine mammal observers shall have the following qualifications:

A. At least a Bachelor of Arts or Science in biological sciences
B. Experience or training in recording pinniped behavior
C. Ability to recognize different pinniped species
D. Ability to perform work in small boats, if needed

In addition to the qualifications listed above for the marine mammal observer, the person in direct responsible charge of the marine mammal monitoring team shall have experience in planning and organizing a marine mammal monitoring program similar to the program specified in these special provisions. The person in direct responsible charge of the marine mammal monitoring team shall also have experience in reporting and analyzing the data collected from the marine mammal

monitoring program as specified in these special provisions. The term "observer" as used in this Section of the special provisions shall be understood to mean marine mammal observer.

The Contractor shall monitor the safety zone and the harbor seal haul-out site at Yerba Buena Island. The Yerba Buena Island harbor seal haul-out is a rocky beach located on the southwest side of Yerba Buena Island, immediately to the west of the Coast Guard lighthouse, on the southernmost tip of the Island, as shown on the plans.

At the commencement of each pile installation, a preliminary safety zone shall be established within a 500 meter radius from the location where the pile will be driven. Thereafter, the Contractor shall measure sound pressure levels generated by pile driving and shall adjust the safety zone radius to include all areas where the underwater sound pressure levels equal or exceed 180 dB re 1 µPa. Once the safety zone has been established, when directed by the Engineer, the Contractor will either mark it with buoys and signs in accordance with United States Coast Guard requirements or use equipment that can identify distances, such as range finders or reticulation binoculars, to define the safety zone during marine mammal monitoring.

At the commencement of pile installation demonstration, when directed by the Engineer, the Contractor shall establish a no entry buffer zone of a 500 meter radius measured from the harbor seal haul-out site at Yerba Buena Island. The no entry buffer zone shall be marked with buoys and signs in accordance with United States Coast Guard requirements and the NMFS Incidental Harassment Authorization. The Contractor shall maintain the buoys and the no entry buffer zone until the completion of the pile installation activities. If used, furnishing, installing, maintaining and removing buoys marking the no entry buffer zone will be paid for as extra work in conformance with the provisions in Section 4-1.03D, "Extra Work," of the Standard Specifications.

During periods that the piles are being driven, three observers shall monitor the safety zone during daylight hours and six observers shall monitor the safety zone during nighttime hours. Two observers shall monitor the Yerba Buena haul-out site during both daylight and nighttime hours. Monitoring of the safety zone and at the Yerba Buena haul-out site shall occur simultaneously. Marine mammal monitoring shall begin at least 30 minutes prior to the start of pile driving and shall continue until 30 minutes after the pile driving has ceased.

No marine mammal observer shall be on duty for more than four consecutive hours at a time.

Marine mammal observers shall be positioned so that the entire safety zone is within view and can be effectively monitored for marine mammals. The observers on Yerba Buena Island shall be positioned on an elevated vantage point so that the entire haul-out is within view. If the Contractor needs to observe the Yerba Buena haul-out zone from U.S. Coast Guard (USCG) property, they shall notify, through the Engineer, the USCG Group Engineering Office, Lieutenant Robert Vaughn, (510) 437-3285, email RVaughn @d11.uscg.mil or Commander Eugene Cunningham, (510) 437-3271, email ECunningham@d11.uscg.mil a minimum of twenty-four (24) hours in advance and provide them with a copy of the Marine Mammal Monitoring Plan. While on the USCG property, the Contractor shall comply with all USCG requirements. Observers shall work together to provide systematic monitoring of both the safety zone and the Yerba Buena Island haul-out site.

Pre-construction data on marine mammal sightings within the safety zone shall be gathered by the Contractor prior to the commencement of the pile installation or any related activities such as deployment of pile-driving equipment, sound attenuation systems, and noise and vibration monitoring equipment. This "pre-construction" data shall be gathered for 3 tide cycles. These tide cycles do not need to be consecutive and may be conducted on three separate days.

If a marine mammal is observed within the safety zone prior to commencement of a pile driving episode, the Contractor shall wait a minimum of 15 minutes for the mammal to move out of the safety zone. If after 15 minutes that marine mammal does not evacuate the safety zone, pile driving will be permitted to commence.

Floating marine mammals carcasses observed prior to the pile installation demonstration shall be tagged before the start of pile installation so they are not confused as a project-related casualty. The tags shall be of waterproof material and shall be secured in such a manner that they are attached to the carcass for the full duration of the contract. Refer to provisions for Submittals specified within this Section, "Marine Mammal Monitoring," for requirements for stranding report submittal. After tagging, the Contractor shall leave all floating marine mammal carcasses as they were found.

The Contractor shall coordinate monitoring activities and pile installation schedule with the marine mammal monitors and the Engineer. Marine mammal observers shall be made aware of the pile installation schedule by the Contractor.

EQUIPMENT

Observations of marine mammals shall be made using equipment necessary to monitor the safety zone and the Yerba Buena Island haul-out site effectively. Such equipment includes big-eye binoculars, a monopod and/or tripod, a spotting scope, a range-finder and a Global Positioning System (GPS). Infrared or image intensifying equipment shall be used for nighttime operations. Observers shall also be equipped with commercial marine band radios so that they will be in contact with each other.

DATA COLLECTION

The Contractor shall collect data which shall be recorded in a log and which shall include the following information:

A. Species and numbers of marine mammals observed.
B. Time and location of observation.

C. Animal behavior.
D. Direction that the marine mammal is heading.
E. Estimated number and species of marine mammals incidentally harassed, as defined by the Marine Mammal Protection Act.

Disturbance from any source shall also be noted, as well as any behavioral responses to such disturbances. Disturbance is defined as any acoustic or visual stimulus or combination of acoustic and visual stimuli that could elicit a marine mammal response. Disturbance can include sound from a boat passing by or an aircraft flying overhead. The source of the disturbance shall be described as well as the distance of the source to the monitoring site. Daily Reports shall also include time of pile driving commencement and cessation. The Daily Report shall include all data recorded, an estimate of the species, and estimate of the number of marine mammals that may have been harassed as a result of the pile installation activities. Data shall be recorded on all environmental conditions that may affect marine mammal sightings and visibility such as fog, glare, tide levels, wind direction, and speed and swell and/or chop direction and height. Data gathered at Yerba Buena Island shall also include total counts of all harbor seals present at the haul-out site, once every 30 minutes, and more detailed demographic and behavioral data such as sex and age class when possible.

SUBMITTALS

Qualifications of Observers and Person in Direct Responsible Charge.—The Contractor shall submit the resumes of the proposed team of observers and the Curriculum Vitae of the person in direct responsible charge to the Engineer within 5 working days following the notice of award. Within 15 working days of receipt of these resumes, the Engineer will review and approve, and obtain the approval of the NMFS of person in direct responsible charge.

Marine Mammal Monitoring Plan.—The Contractor shall submit to the Engineer a detailed marine mammal monitoring plan prepared by the person in direct responsible charge of the marine mammal monitoring within 15 working days following notice of award. The Engineer will have 15 working days to review the plan. If revisions are required, as determined by the Engineer, the Contractor shall revise the plan as required to obtain the Engineer's approval within 15 working days of receipt of the Engineer's comments. The Contractor shall obtain the approval of the marine mammal monitoring plan prior to implementation. The Contractor shall include in the plan the proposed format for pre-construction and daily reports. Each report shall be submitted on 8 1/2 by 11 inch paper and each page of report shall include the project name, date, and name and location of the marine mammal observer. The observer reporting shall sign each report.

Daily Reports.—The Contractor shall submit the marine mammal observers' monitoring reports to the Engineer on a daily basis. Reports may be submitted by hand, fax, or e-mail. If reports are submitted by e-mail, the e-mail submittal shall be followed by submittal of paper copies with wet signatures of the observers reporting.

Stranding Reports.—When a floating marine mammal carcass is observed, the Contractor shall complete and submit an NMFS stranding report, on the same day such observation is made, to the Engineer and the NMFS.

Final Data Report.—The Contractor shall submit to the Engineer a final data report prepared by the person in responsible charge of the marine mammal monitoring team. A draft final data report shall be submitted to the Engineer within 15 working days following the completion of pile installation demonstration. The draft final data report shall comply with all requirements outlined in the NMFS Incidental Harassment Authorization. The draft final data report shall include an executive summary, a section documenting methodologies and equipment used, tabulated data of all measurements and observations taken by the marine mammal monitoring team, and an estimate of the numbers of marine mammal incidentally harassed due to the pile installation demonstration. Copies of all field logs will be included as an appendix to the report. The draft final data report will also discuss the results of the coordination of the marine mammal monitoring with the pile installation activities, and the sound attenuation effectiveness monitoring. The Engineer will have 15 working days to review the draft final data report. The draft final data report shall be revised as required to obtain the Engineer's approval and re-submitted to the Engineer within 10 working days of receipt of comments on draft. The final data report shall be submitted in an electronic form as well as copied on 8 1/2 inch by 11 inch paper.

The final data report shall incorporate sound-attenuating systems inspection report data, correlating the type of system in operation, operating times of sound-attenuating system, and times of reported irregularity or malfunction in sound-attenuating system.

COORDINATION

The Contractor shall notify the Engineer prior to beginning work at the jobsite. The Contractor shall meet with the Engineer on a weekly basis for coordination purposes. Representatives of the marine mammal monitoring and sound attenuation effectiveness monitoring teams shall attend meetings if requested by the Engineer. If otherwise required by the Engineer, coordination shall be conducted by other means such as telephone conferences.

The Contractor, including the persons in responsible charge of the marine mammal monitoring and sound attenuation effectiveness monitoring teams shall meet with the Engineer and/or representatives of the Engineer three times during the contract in order to coordinate the gathering of information. A meeting will be held prior to the start of the pile installation to discuss the type, scope and purpose of the data which will be gathered. A second meeting will be held at the scheduled

midpoint the pile installation demonstration to discuss the status of the monitoring efforts, potential data gaps and any problems encountered. A third meeting will be held immediately following the completion of the pile installation demonstration to discuss the format of the final data report and the sound attenuation effectiveness monitoring final report.

MEASUREMENT AND PAYMENT

Marine mammal monitoring will be measured and paid for at a lump sum price.

The contract lump sum price paid for marine mammal monitoring shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in marine mammal monitoring, complete in place, including coordination of activities, preparation of the marine mammal monitoring plan and all reports, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

Full compensation for the participation of the person in responsible charge of the sound attenuation effectiveness monitoring team in the coordination meetings specified in this section will be considered as included in the contract lump sum price for sound-attenuation effectiveness monitoring and no additional compensation will be allowed therefor.

10-1.16 SOUND ATTENUATION EFFECTIVENESS MONITORING

The work shall consist of preparing a sound attenuation effectiveness monitoring plan; furnishing, deploying, and removing noise and vibration monitoring equipment; and monitoring and recording noise and vibration from pile driving operations, as specified in these special provisions. The work shall include reporting and evaluating noise and vibration data and coordinating activities with pile driving operations and marine mammal monitors. Monitoring includes benthic (bay bottom) vibration monitoring, waterborne sound monitoring, and airborne sound monitoring. For purposes of this Specification, pile installation demonstration refers to the senquences of operations 1 through 19 described in Section 10-1.01, Order of Work of these Special Provisions; pile installation refers to the all activities involved with driving a single pile; pile driving refers to the time when the hammer is physically driving the pile.

The work shall comply with the Incidental Harassment Authorization issued by the National Marine Fisheries Service (NMFS). Copies of the Incidental Harassment Authorization are available for inspection at the Toll Bridge Duty Senior at the District 04 Office, 111 Grand Avenue, Oakland, California 94612, email duty_senior_tollbridge_district04@dot.ca.gov, telephone number (510) 286-5549.

The Contractor shall obtain required permits in accordance with Section 7-1.04, “Permits and Licenses,” of the Standard Specifications, from the United States Coast Guard for installing, marking, and removing monitoring devices in the Bay.

SYSTEMS DESCRIPTION

The monitoring system shall include three types of monitoring equipment consisting of ground vibration monitors (geophones), waterborne monitors (hydrophones), and airborne monitors (microphones). At the completion of the monitoring plan, the Contractor shall remove monitoring equipment, and the equipment shall remain the property of the Contractor. The sound attenuation effectiveness monitoring team will coordinate its activities with the marine monitoring team described in Section 10-1.15, Marine Mammal Monitoring.

Measurements shall take place during and be representative of various phases of pile installation, including driving of initial segments, driving of subsequent segments, and final re-strike. Measurements shall be taken and recorded for a minimum of 15 minutes during each phase of pile installation. For each phase of pile installation for pile #3, two sets of measurements, each for a minimum of 15 minutes, shall be taken and recorded. One set of measurements shall be taken and recorded during the period when the sound attenuating system is being operated with air bubbles and another set of measurements shall be taken and recorded during the period when the sound attenuating system is being operated without air bubbles.

Background measurements when pile driving is not occurring and generators are not operating shall also be made using the ground vibration monitors, waterborne monitors, and airborne monitors. On days when pile driving is conducted, before and after pile driving and between each pile driving period, background measurements shall be made at a minimum of two sites as listed in the sound attenuation effectiveness monitoring plan as approved by the Engineer. Measurements shall be taken for a period of 15 minutes except that in-water measurements shall be taken for a period of 5 minutes.

The person in direct responsible charge of the sound attenuation effectiveness monitoring plan shall have the following qualifications:

A. At least a Bachelor of Arts or Science.
B. Experience in planning, organizing, and implementing a monitoring plan similar to the plan specified in these special provisions.
C. Experience in reporting and analyzing the data collected from the plan as specified in these special provisions.

Ground Vibration

Ground vibration shall be measured during each phase of pile driving. Ground vibration monitoring equipment shall include velocity transducers embedded in a driving point filled with material of similar density to the bay floor and augured into the mud. The geophones shall be connected to a seismograph in a waterproof housing that may be lowered and raised from the bottom of the bay, as needed, or may be cabled to a buoy or support barge in accordance with the approved monitoring plan. Monitoring equipment shall be placed in four locations for each pile. Three positions shall be radially 15 meters, 50 meters, and 150 meters from the center (or mid-embedment length of the battered pile in the direction of the batter) of each of the 3 piles. The fourth position for an embedded geophone shall be 50 meters from each pile center (or mid-embedment length) perpendicular to the radial line of the geophones. Geophones shall be embedded at the shallow depth indicated in the sound attenuation effectiveness monitoring plan approved by the Engineer. The geophones shall measure within a frequency band of 1 hertz (Hz) to 5 kilohertz (kHz). The monitoring equipment shall be marked for navigation safety and easy retrievability in accordance with United States Coast Guard requirements. Measurements shall be taken simultaneously at each location specified.

Waterborne Noise Measurement

In-water impulse and time-averaged sound levels shall be measured during all phases of pile installation for all three piles. Background measurements when pile installation is not occurring shall also be conducted for all three piles to establish water column noise levels in the bay. Boat or buoy-based measurements shall be conducted using hydrophones at approximately 50, 150, 500, and 1,000 meters from the center of each pile in a westerly direction towards Yerba Buena Island. Hereinafter, these locations are referred to as the "50 meter distance," "150 meter distance," "500 meter distance," and "1000 meter distance." Measurement shall include frequency analysis between approximately 5 Hz and 200 kHz. Noise measurement may be made using a real-time signal analyzer or recorded with calibrated recording equipment for later signal analysis in accordance with the approved monitoring plan. Data shall be recorded and stored in a magnetic format that allows for additional analysis at a later time. Time history and sound frequency plots for pile installation phase shall be made for each measurement. Waterborne noise measurements may be co-located with vibration measurements if feasible. Measurements shall be taken simultaneously at each location specified. Noise measurements shall be taken at several depths as follows:

A. Between 1 and 3 meters from the surface at the 50 meter distance, 150 meter distance, 500 meter distance, and 1000 meter distance.
B. At approximately one-half bay depth at the 150 meter distance, 500 meter distance, and 1000 meter distance.
C. Within 3 meters of the bottom at the 50 meter distance.

Measurements shall be taken at three additional locations as follows:

A. In the vicinity of eelgrass beds located north of the Oakland approach to the San Francisco Oakland Bay Bridge at a depth of approximately one-half bay depth. Location within eelgrass beds where measurements shall be taken will be determined in the sound attenuation effectiveness monitoring plan.
B. Suspended from the pile-driving barge for each pile, on the opposite side from driving operations, at a depth of between 1 and 3 meters from the surface.
C. 500 meters either north or south from each pile location at approximately one-half bay depth. The direction, north or south from the pile location, shall be determined in the monitoring plan.

All measurements, including background, are expected to be in the range of between approximately 60 and 250 dB relative to 1 μPa. The monitoring equipment, if not boat mounted, shall be marked for navigation safety and easy retrievability in accordance with United States Coast Guard requirements.

Airborne Noise Measurement

Airborne noise measurement of impulse, Leq, and Lmax noise levels shall be co-located and conducted concurrently with in-water measurements at the 50 meter distance and 500 meter distance for each pile. Measurements shall be conducted with a Type 1 or Type 2 noise meter and shall be C weighted. Frequency spectra or 1/3 octave-band measurements shall be provided for each pile. One location for frequency spectra or 1/3 octave-band measurements for each pile will be determined by the Engineer. Measurements shall be taken simultaneously at each location specified.

Airborne noise levels shall also be measured at Yerba Buena Island near the haul-out beach. A type 1 or Type 2 noise meter shall be located on Yerba Buena Island as near as possible to the haul-out area without disturbing the marine mammals and shall be C weighted. The meter shall be situated at the beginning of the pile installation demonstration to record consecutive 15 minute intervals for one day prior to commencement of pile installation, and functioning of the meter shall be checked daily.

SUBMITTALS

Qualifications of the Person in Direct Responsible Charge of the Sound Attenuation Effectiveness Monitoring Plan.—The Contractor shall submit the resume of the proposed person in direct responsible charge to the Engineer within 5 working days following the notice of award. The Contractor shall obtain the review and approval of the Engineer and, through the Engineer, obtain the approval from the NMFS of the proposed person in direct responsible charge.

Sound Attenuation Effectiveness Monitoring Plan.—The Contractor shall submit to the Engineer a detailed monitoring plan prepared by the person in direct responsible charge of the sound attenuation effectiveness monitoring plan within 15 working days following notice of award. The Engineer will have 15 working days to review the detailed monitoring plan. If revisions are required, as determined by the Engineer, the Contractor shall revise and resubmit the monitoring plan within 15 working days of the receipt of the Engineer's comments. The Engineer will have 5 working days to review the revisions. The plan shall include detailed methodology, equipment to be used, data to be recorded, and outline and format of reports to be prepared. The Contractor shall obtain the Engineer's review and approval of the monitoring plan prior to pile installation. The Contractor shall obtain the Engineer's approval of any deviation from the plan prior to deviating from the plan.

Records.—Records of measured sound levels shall be submitted to the Engineer within 5 days of the completion of the sound attenuation effectiveness monitoring.

Report.—The Contractor shall submit a Sound Attenuation Effectiveness Monitoring technical report prepared by the person in responsible charge of the sound attenuation effectiveness monitoring team. A draft technical report shall be submitted to the Engineer within 15 working days following the completion of the sound attenuation effectiveness monitoring. The report shall include an executive summary, a section documenting methodologies and equipment used, recommendations for any modifications to protocol for future monitoring, and tabulated data of all measurements and observations taken by the noise and vibration monitoring team. Copies of all field logs shall be included as an appendix to the technical report. The Engineer will have 15 working days to review the draft technical report. The report shall be revised as required to obtain Engineer's approval and re-submitted to the Engineer within 10 working days of receipt of comments on draft. Recordings and/or analyzer output shall be provided in a magnetic format that allows for further analysis. The report shall be submitted in electronic format and as well as on 8 1/2 inch by 11 inch paper.

Report shall incorporate sound-attenuating systems data, correlating the type of system in operation, operating times of sound-attenuating system, and times of reported irregularity or malfunction in sound-attenuating system.

COORDINATION

The Contractor and the person~~s~~ in responsible charge of the sound attenuation effectiveness monitoring team shall participate in the coordination meetings specified in Section 10-1.15, Marine Mammal Monitoring, of these special provisions.

MEASUREMENT AND PAYMENT

Sound-attenuation effectiveness monitoring will be measured and paid for at a lump sum price.

The contract lump sum price paid for sound-attenuation effectiveness monitoring shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in sound-attenuation effectiveness monitoring, complete in place, including coordination of activities, participation in the coordination meetings specified in Section 10-1.15, Marine Mammal Monitoring, and preparation of the sound-attenuation effectiveness monitoring plan and all reports, as shown on the plans, as specified in the Standard Specifications and these Special Provisions and as directed by the Engineer.